

In This Issue—*Service Right Now*

# MOTOR AGE

Vol. XLIX  
Number 7

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CHICAGO, FEBRUARY 18, 1926

Thirty-five Cents a Copy  
Three Dollars a Year

**All-steel ships—for  
safety**

**All-steel Pullmans—  
for safety and silence**

**All-steel buildings—  
for protection**

**All-steel bodies—for  
the same reasons—**

*Edward S. Jordan*

President  
Jordan Motor Car Company, Inc.  
Cleveland



## **Success that is Both Brilliant and Sound**

Hupmobile has given to its dealers two of the most brilliantly successful cars on the motor car market.

The Hupmobile Eight and the Hupmobile Six are more, however, than merely popular because of their low prices.

They are cars that stay sold.

They make more money for the dealer because they do not eat up profits in free service.

They make more and better customers because they are built to stand up at low cost over a long period.

Hupmobile dealers today find themselves in a strong position—a position which becomes still stronger with every passing day.

# **HUPMOBILE**

## **EIGHTS and SIXES**



FROM THE STUDY  
OF LIGHT COME  
VICTOR LAMPS

# Victorgrams

THERE'S A VICTOR  
LAMP FOR EVERY  
AUTOMOTIVE NEED

VOL. 1. NO. 7.

EDITED BY VICTOR LIGHT

*"Clardy, my boy, you've put it over."*



"I just drove in from Springfield and not once on the way down was I blinded by any cock-eyed headlamps. Believe me, Jim, you are doing this community a real service.

"For years I've been cursing these glaring headlights and wishing all sorts of bad luck to their owners. I am just beginning to realize that fifty per cent of the offenders are plumb ignorant of what they're doing. To most of 'em a headlight is about as familiar as the fourth dimension.

"They needed a Moses to guide them and, boy, you're doing it."

"I may have started it," agreed Clardy, "but I now have many

helpers. Six other garages in town have put up my well-known sign 'DON'T FORGET TO TEST THE LAMPS' and are doing just as good a job as my men."

"How do you explain their falling in line, Jim?"

"For two reasons," answered Clardy, "both of which show that the men in the automobile game are on their toes.

"There is a definite need for better road lighting and it's the garage man's job to supply it. And like every other real service to humanity, there's money in it.

"I'm not the originator of this idea of more and better lights for automobiles; I merely saw in this need,

an opportunity to better serve my customers and my bank account.

"By the way, Coleson, you really ought to have a spot light on that car. I've got a new one inside that I'd like to show you—the Victor Comet. It has the same kind of a reflector that I put in your headlamps. It spreads the light the full width of the road. I'd like to show it to you."

"All right, Jim. Sold. Just put it on and send me the bill. If you say it's good, that's quite enough for me."

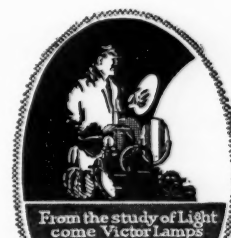
\* \* \* \* \*

Valuable data and literature on the subject of automobile lights and lighting will be gladly sent on request.

Use coupon below. No obligation.

## THE CINCINNATI VICTOR COMPANY

712-720 Reading Road,  
CINCINNATI, OHIO



The Victor Line

FILL IN AND MAIL THIS COUPON  
AND WE WILL SEND YOU FREE COPY  
OF 28-PAGE BOOK ON MOTOR-  
VEHICLE HEADLIGHTING.

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THE CINCINNATI VICTOR CO.

716 Reading Road  
CINCINNATI OHIO

# BUSINESS REVOLUTIONIZED BY HOLMES WRECKER



WORD OF QUALITY  
WHEN THE PRICE  
IS FORGOTTEN

## HALL'S GARAGE



AUTOMOBILE REPAIRING  
IN ALL ITS BRANCHES  
802 CASS STREET  
PHONES 1395-1397

WE HAVE THE MOST EFFICIENT  
WRECKING EQUIPMENT  
IN THE STATE

Ernest Holmes Co.  
Chattanooga, Tenn.

TAMPA, FLA.  
Jan. 7, 1926

Gentlemen:

This is the opening of a new year and in reviewing our business for the last year it seems fitting and fair to express to you the great satisfaction we have experienced in the use of your wrecking equipment. We started using Holmes Wreckers in the latter part of 1923, at that time our volume of business was running approximately \$7,000.00 per year. Last year our gross business ran approximately \$65,000.00.

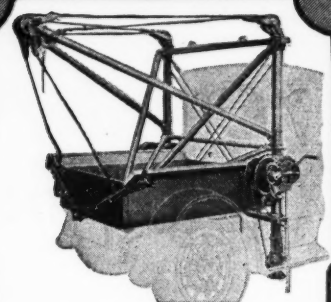
For the last six months of 1925 we averaged 21 calls per day for our wrecking equipment. Our gross income from wrecking charges being over \$18,000.00. We are now operating nine (9) Holmes in active service with two more in reserve for emergency cases. We could not get along now without Holmes Wreckers and cannot praise them too highly. Any garage man will find that they will revolutionize his business.

We advertise this way "When better Wrecking Service is given Hall will give it" and I think you are entitled to say when better wreckers are built Holmes will build them. Thanking you for the courtesies extended us the past year and wishing you continued success and prosperity for 1926

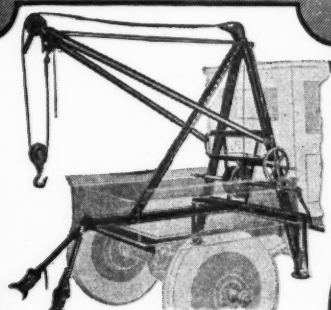
With kindest  
personal regards,

I remain  
Hall's Garage Inc.

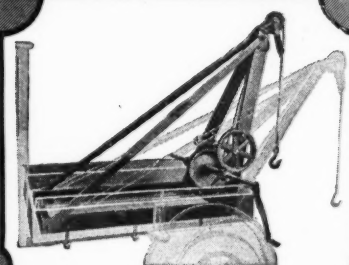
By *Harold C. Hall*  
Dns



HOLMES WRECKER No. 485



HOLMES WRECKER No. 250



HOLMES WRECKER No. 110



Sold by Leading Automobile Accessory Jobbers

**ERNEST HOLMES COMPANY CHATTANOOGA, TENN.**



# MOTOR AGE

Reg. U. S. Pat. Office

VOL. XLIX

No. 7

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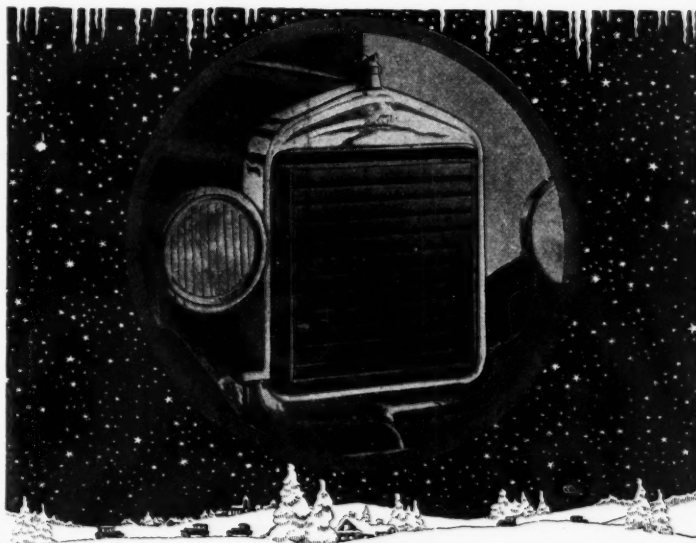
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## Every Star Means 1000 Fords— and every Ford is a prospect

There never was an accessory made for a Ford car that has the selling possibilities of the Vernay All-Year-Round Shutter. It sells for \$5.50 which is an astonishingly low price for an all-steel shutter with brass bearings throughout. It is strong, durable, sure in action, quiet and as handsome a job as you've ever seen.

### All year? Certainly

The extra radiation surface—30% more than in other shutters—permits all-year use. Once on, it stays on. And anybody can put it on for there isn't a hole to be drilled.

### Steel and brass

The Vernay is made of pressed steel with all-brass bearings. They can't rust and they don't stick or rattle. There's nothing in the mechanism of a Vernay to fail. It is hand-controlled from the dash with six self-locking adjustments.

### Will it sell?

It will. It is selling on sight. You yourself will say so as soon as you see it. And what a market? Ford owners *will* pay \$5.50. They will throw away their makeshifts to install a Vernay. We do not expect to fill all orders this Season. But we urge you to buy a few Vernays now. Get them out in the field and on cars so they will sell next year's business for you. Make no mistake. The Vernay is the coming shutter. Wire or phone your orders.

LAMINATED SHIM CO., INC.

200 Fourteenth St., Long Island City, N. Y.

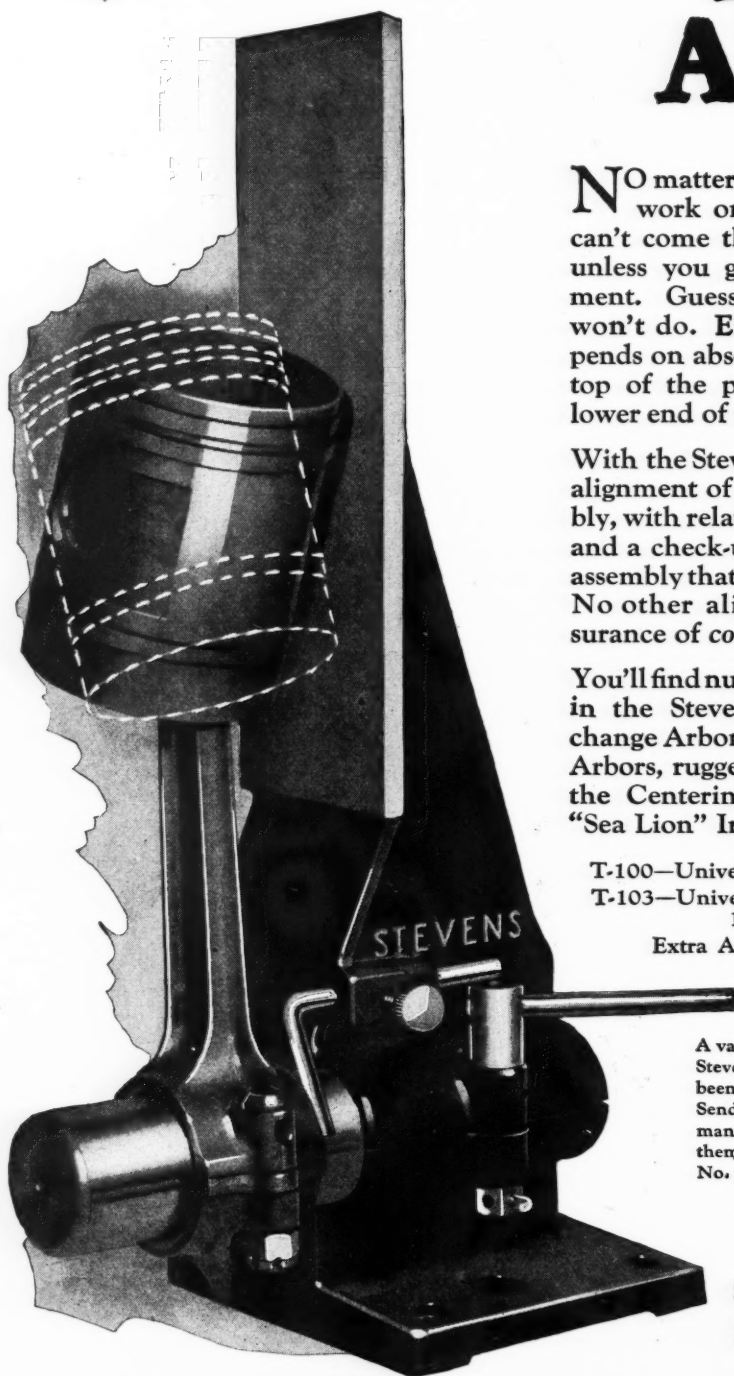
**\$5.50**

Ford size

ALL YEAR  
ROUND  
**VERNAY  
SHUTTER**

*For  
Complete  
Check-up*

# STEVENS PISTON ALIGNER



**N**O matter how conscientiously you work on the engine block you can't come through with a clean job unless you get perfect piston alignment. Guesswork and near-accuracy won't do. Engine performance depends on absolute accuracy—from the top of the piston right down to the lower end of the "con" rod.

With the Stevens Aligner you get true alignment of every part of the assembly, with relation to every other part—and a check-up both before and after assembly that insures factory precision. No other aligner gives you this assurance of *complete accuracy*.

You'll find numerous exclusive features in the Stevens Aligner—the Quick-change Arbor Clamp; Interchangeable Arbors, rugged enough for test-fitting; the Centering Gauge; the perfected "Sea Lion" Indicator, etc.

T-100—Universal Model with 1 Arbor, \$20

T-103—Universal Model with 8 Arbors,  
1 1/4 to 2 1/2" \$40

Extra Arbors, any size \$3.10

A valuable, new service handbook on Stevens "Speed-Up" Tools has just been issued in convenient pocket size. Send us the name of your shop foreman and mechanics, and we'll mail them each a copy. Ask for handbook No. 18.

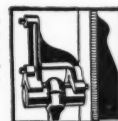
"Thru your jobber—  
his service is economy."

**Stevens & Company**  
375 Broadway 1438 S. Mich. Blvd.  
NEW YORK CHICAGO

"Sea Lion" in position for correcting bends in connecting rod.



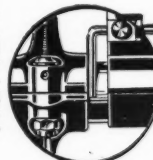
The "Sea Lion" is here shown checking connecting rod for twists.



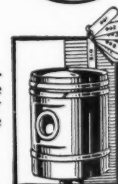
Connecting rod bearings are test-fitted on arbor.



Centering Gauge insures final accuracy by checking central alignment of connecting rod.



Tapered pistons are checked by feeler gauge readings.



**Largest  
Line of  
Special  
Tools  
for  
FORD**

**Stevens** *SPEED UP*  **Tools**  
TRADE MARK



5 reasons why the  
Studebaker franchise  
grows more valuable  
every day:

\*One-Profit Value  
Unit-Built Construction  
Always Kept Up-to-Date  
Used Car Pledge  
Lowest Time-Payment Rates



This symbol means that Studebaker prices do not  
include the profits of outside body-makers

\*Studebaker is the one quality car with a selling advantage that can be duplicated only at a cost of \$100,000,000—because this is the amount of capital used by Studebaker to make One-Profit cars possible. Thus, when a Studebaker dealer sells "One-Profit value" he knows he is selling a tangible, saleable feature that is beyond the reach of competition—and will be for years to come.

The Studebaker Corporation of America  
South Bend, Indiana

T H I S   I S   A   S T U D E B A K E R   Y E A R

# And again at Chicago

## NEW STUTZ

retail sales at the Automobile Show  
break all records of the industry

We hereby certify that a total of two hundred and fifty-one (251) retail orders for NEW STUTZ cars were taken at the Chicago Automobile Show from January 30th to February 6th (inclusive) 1926.

These orders represent a combined value of \$828,300, and were all taken from individual buyers, no wholesale orders being included in the above figures.

STUTZ CHICAGO FACTORY BRANCH, INC.



President.



Subscribed and sworn to before me this 7th day of February, 1926.

  
Notary Public.



Total retail sales at New York, Philadelphia and Chicago Automobile Shows:

603 cars, with a combined value of \$1,989,900

breaking all retail sales records for each of these shows.

### DEALERS

who are interested in this record-selling automobile are invited to write or wire for full information.

STUTZ MOTOR CAR COMPANY  
of AMERICA, Inc.  
Indianapolis

## First Permit for a Lady

New York, Jan. 13—Miss Florence E. Woods permitted a Mail and Express reporter to accompany her on her afternoon excursion yesterday and learn for himself that a woman may guide a flying automobile.

An interested crowd always collects when Miss Woods and her vehicle appear upon the street. With a jingle of the bell somewhere beneath the laprobe, the audience of curious persons was swiftly left behind, and Miss Woods turned up Fifth Avenue with a more graceful sweep than ever a horse-drawn carriage made.

In and about among the wagons, trucks and carriages—passing all—passed by none. At the crossings the sharp warning of the bell told pedestrians to beware, and then, with a motion of the little lever at her side, Miss Woods sent her auto' jumping ahead again. All along the avenue much interest was manifested. New York no longer stares at the average motor carriage, but an attractive young woman driving a graceful self-propelled runabout is not a usual sight.

# Passes All . . . Wagons

The Mail and Express reporter learned for himself that a woman may guide a "flying automobile"—in 1900.

What every dealer now knows is that a woman may also guide the purchase of an automobile, and quite usually does.

To women, too, the name of Timken Bearings has been made significant by penetrating Timken advertising. The very mention of Timken stands for the extreme motor car reliability which women want, above all things.

That's the beauty of it. Timken superiorities are so well known that mentioning Timkens doesn't raise mechanical questions—*it settles them.*

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

# TIMKEN Tapered Roller BEARINGS

Where  
the wear  
comes



**WEEDS**  
stand the most  
miles of hard pounding

**I**T'S the hammer, hammer, hammer on the hard, hard road—60,000 impacts every 100 miles—that's the punishment every cross chain receives. No wonder they must be made right.

WEED cross chains are the result of 23 years of constant laboratory and road testing, and we KNOW from actual tests that there are none better . . . With the handy WEED pliers, cross chains can be replaced when they finally wear out, and they are on to stay.

Dealers profit by carrying a complete line of the genuine WEED cross chains—they are brass-plated and come in handy cartons.

Every one knows WEED Chains. Every one knows that this name stands for quality, service, and satisfaction. This *WEED Reputation* makes it easier to sell WEED Chains. Display them. Sell them.

# WEED CHAINS



Standard  
for 23 years

**AMERICAN CHAIN COMPANY, Inc.**  
BRIDGEPORT, CONNECTICUT

In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario

District Sales Offices:

Boston Chicago New York Philadelphia Pittsburgh San Francisco



# How Much Profit?

Do You Really Make a "Net" or Are You Only Fooling Yourself? This Article Tells How Analysis Disillusioned One Dealer—Now Going Good

**W**HAT is profit? This is an old question to the automobile dealer, but one which will bear frequent repetition and meditation. Investigations time and again have revealed that some dealers do not *know* profit. What they often think is profit—is something else.

The trouble? Another old saw. Lack of analysis, of course. And many dealers thus fooling themselves are in positions identical with that of one whose business recently was analyzed by G. V. Orr, president and manager of the Overland Motor Co. of Chicago, a factory branch. The dealer had been slipping steadily. In the course of the investigation Mr. Orr asked:

"How much money do you make when you sell a \$1600 car?"

"On the basis of our discount," came the reply, "we make about \$375."

"What would you think," remarked the branch manager, "if I told you that you only made \$24?"

"I would think you were joking," said the merchant.

"All right, look here. Your gross profit is 16 per cent, which ought to be considerably more. Your total expense is 14½ per cent, which ought to be less; however, these are the facts as taken from your books. That leaves you a net profit of 1½ per cent and 1½ per cent of \$1600 is \$24. You can readily see your folly in taking in automobiles as recklessly as you have and slipping \$50, \$75 or \$100 necessary to make the deal—when in the final analysis you have only \$24 on which to play in that transaction."

The dealer got a new viewpoint and admitted he was

licked by that argument, but Mr. Orr came at him again:

"You are pretty well satisfied, aren't you, if you take in a used car today at \$600 and sell it tomorrow at \$600?"

"I am not satisfied—I am tickled," said the dealer.

"You would think that you got out all right on that one, wouldn't you?" remarked Mr. Orr.

"You bet."

Then the branch manager shot this at him:

"What would you say if I told you that you lost \$90 on that transaction? It costs you 14½ or 15 per cent to do business. Now, it costs you that on Monday or Tuesday or Wednesday whether you sell ten cars or just that one.

"Just because you don't sell one your salary doesn't stop, the stenographer's salary doesn't stop, the heat isn't shut off, etc. So, as a matter of fact, it costs you on your entire volume of sales 15 per cent to do business."

Continuing, Mr. Orr said:

"Fifteen per cent of \$600 is \$90. You are only breaking even on that automobile when you take it in at \$510.

"You are not making a single cent."

There is an actual occurrence which might have been enacted in any section of the country—in any town or city. Most of the large and successful dealers will wonder "why it can be" but it *is* and through the trade are many automobile merchants who are just as far away from the grasp of "profit" as the dealer in the instance specifically cited.

ANALYZE—and do it from top to bottom.

## Profit on New Car Sale

Gross profit .....	16 %
Total Expense .....	14½ %

Net profit rate	1½ %
-----------------	------

List Price .....	\$1600
------------------	--------

Net profit rate .....	1½ %
-----------------------	------

Real net profit .....	\$24.00
-----------------------	---------

Yet the dealer thought his net profit, based on discount, was \$375.

## Loss on Used Car Deal

Trade allowance .....	\$600
-----------------------	-------

Resale price .....	\$600
--------------------	-------

Cost of doing business .....	15 %
------------------------------	------

LOSS on used car deal .....	\$ 90
-----------------------------	-------

And the dealer thought he was breaking even.



*New building of Moseley Motor Co., with Illinois State Capitol in the background*

**R**EMINISCENT of the architectural style of Napoleonic France, the big new home of the Moseley Motor Company, Ford dealer at Springfield, Ill., combines artistic beauty and efficiency of arrangement. While its most imposing facade fronts on Monroe street, between Second and Third streets, there is an almost equally large frontage on Second street, facing the capitol building of Illinois.

The Moseley Motor building, one of the finest in central Illinois, is built in the shape of an "L." It is three stories in height and built of No. 1 pressed brick with pure Portland cement. The inner walls and sidewalls are of No. 1 paving brick. Overhanging shelters over the upper front windows lend a gabled effect to the exterior.

The new building cost \$200,000. It has a frontage of 80 feet on Monroe street, and 70 feet on Second street. The three floors give it a floor space of over 40,000 square feet. A filling station and parking yard stands in the center of the "ell," which adds another 5000 square feet of usable space. Across the street from the building is a large vacant lot, which will be used for the disposal of used cars when the weather permits.

The Monroe street showroom is 65 by 55 feet in size. The floor is of red tile, with embossed walls in cream tones. Handsome reed furniture, with cretonne upholstery is placed about for the comfort of the customers.

Immediately back of the showroom, and having a frontage both in the show room and on the service floor is located one of the largest stock rooms for the sale of Ford parts and accessories in the entire country. Here in trim racks, frames, on shelves and in boxes is efficiency exemplified. The stock room has two dispensing counters. One opens to the display room for the convenience of customers who desire added accessories for their cars, while the other counter is for the use of the service department.

Adjoining the stock room and connected immediately with the show room are the offices of the executives and

## *Built Up This Big FORD BUSINESS In the Shadow of the Illinois State Capitol*

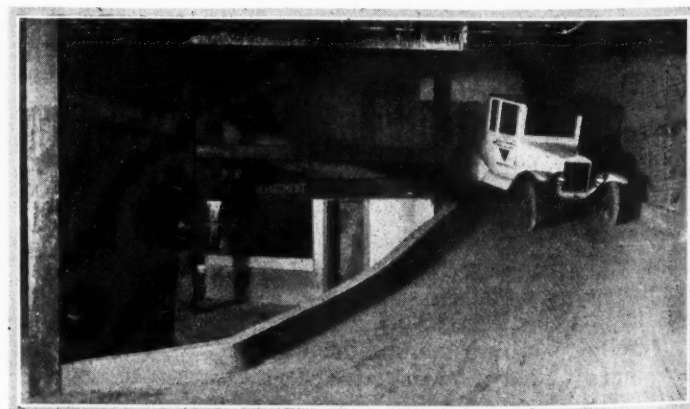
salespeople. W. H. Moseley's office and the office of Leonard E. Belt, general manager, open into the salesroom. Offices of the accounting, bookkeeping and credit departments are adjoining, while directly back of these are the rooms given over to the sales-manager and his assistants.

One of the features of the building is a concrete ramp which is built from the first to the second floors. Cars can be driven under their own power to the second floor, while Fordson tractors will be used for the towing of disabled cars.

On the first floor is also located the battery department, where new batteries are dispensed, batteries charged in eight hours and rentals furnished for those who need them. The car laundry and car testing departments are also located on the first floor, in the Second street wing. The Second street showroom is given over to the sale and display of used Ford and Lincoln cars. The Lincoln service department is also located in the Second street wing, and the owner of a Lincoln car will find here everything that he will need in the way of parts and materials.

### *Labor-Saving Devices*

The general repair shop is on the second floor, in the north, on Monroe street side of the building. This shop is equipped with the latest designs of labor-saving devices for the repairing of Ford cars. It includes the overhead railway system for moving motors and heavy parts about the shop. In the shop are specially designed stands for



*This ramp leads from first floor of new Moseley building to repair departments on second floor*



# AND THESE MEN RUN IT



J. E. Dearmin, sales manager Moseley Motor Co. Leonard Belt, general manager Moseley Motor Co. W. H. Moseley, president Moseley Motor Co.

motor and axle work, presses and a powerful burning-in machine. Many other special labor saving devices and tools are installed here.

The west wing of the second floor is utilized by the assembly department. In this section cars arriving from the factory are assembled, inspected and tested by experts prior to delivery. A large and complete supply of special truck bodies and commercial body equipment are also kept in this department.

It is on the second floor, central section, that used Ford automobiles are completely reconditioned. An especially constructed painting and dry room, made of hollow tile and absolutely dust-proof insures perfect repainting work. The dust-proof room is equipped with a steam heating system that maintains a warm, dry atmosphere conducive to perfect glossing of paint.

W. H. Moseley, head of the company, came to Springfield in March 1923. Prior to that time he represented the American Exchange Bank of New York. His territory included the southern states and all of the entire republic of Mexico. When Mr. Moseley arrived in this city he found only one location available for his newly appointed Ford agency. This was the old Bruce building at 216-222 North Seventh street. Here he began the business which developed so rapidly that newer and far larger quarters were absolutely necessary. In January of this year Mr. Moseley opened negotiations for the site on which his new building now stands.

Mr. Moseley has surrounded himself with an efficient organization, which numbers the following department heads: Leonard E. Belt, general manager; J. E. Dearmin,

sales manager; H. A. Thompson, office manager; A. J. Hunsley, car appraiser; Joe Sanquinet, service superintendent; Milton B. Overaker, parts department; James Carberry, service floor; B. B. Crowe, repair shop; Frank Ross, paint shop; Milo C. White, used car department; Harry Thomas, Lincoln service department; Francis Harry, battery and electrical department; P. Wigfall, car laundry; G. H. Grant, truck department, and Joe Francis, filling station. There are more than fifty other employees.

## *Personal Element Effective*

It has always been the policy of the Moseley Motor Company to lend a personal touch in the sale of every Ford automobile, truck, Lincoln car or Fordson tractor. Insofar as it is humanly possible every new car purchaser and customer has personally either met Mr. Moseley or the general manager at the consummation of the sale or at the time of the delivery of the car. They have attempted to express personally their appreciation of the business given them and to assure the purchaser that should any occasion arise that needed adjustment that he should immediately make known the difficulty so that a prompt settlement could be made.

Another important factor in the rapid stride of the Moseley Motor Company is largely due to the slogan of the firm—"Service Right Now." The company has attempted at all times to see that customers and car owners are extended courteous and immediate attention upon entrance to the building.

Every week the department heads of the Moseley organization assemble at luncheon, and the troubles and complaints of the week are analyzed. Suggestions are made and tried out. Ideas employed by one department may prove successful in another department. Every man in the organization is given full opportunity to present his ideas in the furtherance of sales and service improvements.

On the showroom floor of the Moseley company is a suggestion box, where both employe and customer may drop a note with a new idea for the betterment of the customer.

## ***Making Dealers Make Money***

Is the subject of an instructive series of articles that will start in an early issue of **MOTOR AGE**.

# Some Used Car Selling Ideas

## How One Dealer Puts Punch in Advertising Copy

SOMETHING new in the way of used car advertising has been used with very good results by the Grand Rapids Flint Company, Grand Rapids, Mich., and in the stunt there is a good idea for other dealers in selling both used and new cars. The advertisement, here reproduced, is largely self-explanatory.

It will be seen that just about everything concerning the sale of the used cars taken in by the company on trades is told in this advertisement. The price at which the used cars were taken in is shown, then the price at which the used cars were sold and the per cent cost to the customer of driving his Flint car the first year.

The advantages of this type of advertising are obvious. Among the other things the ad shows that a considerable number of people who have bought new cars from the company are so well pleased with their purchases that they have repurchased inside of a year. Which, of course, is mighty good advertising for the dealer.

It also shows the liberal allowances given by the dealer for used cars accepted in trades and this has the effect of making prospects feel that it will be a good proposition for them to buy the dealer's cars.


The ad, moreover, gives the impression that the used cars accepted by the dealer in trade are very quickly sold and this adds to the general idea that the cars handled by the dealer are mighty good cars.

Importantly the advertisements let used car prospects see that the company does not boost the price on used cars it accepts in trade but that it resells the cars for just what they were traded in for. Which, of course, is a splendidly helpful proposition in securing more business from used car prospects. Then this advertisement secures a tremendous punch from the fact that it is exceedingly localized and strongly personalized. Study this advertisement itself, and you will agree that it is bound to be effective.

## Pay Cash to Shopmen for Leads That Develop Used Car Sales

DEVELOPING used car sales through a plan which offers a means of profit to the garage owner and garage employees is a business device being used by the Missouri Valley Auto Company, 26th and Grand avenue, Kansas City, Mo. This company distributes Chrysler in the Kansas City territory and acts as dealer in Kansas City. Its used car methods command attention because of its large measure of success in this department—and here again Wayne Butler, head of the company and W. W. Davis, used car manager, evolved a revenue-producing proposition.


Letters outlining the company's proposition were mailed to many garage owners and garage employees. In substance the plan offers a cash bonus on each used car sale made to a prospect sent to the Missouri Valley's Used Car Department by the previously mentioned members of the trade. On used cars selling for more than \$200 the co-operating shopman receives a check for \$10 and a check for \$5 on used cars selling for \$200 or less. The



# PROOF

Of the Resale Value of

## FLINT AUTOMOBILES



The following Grand Rapids people have purchased their second "Flint" and after driving their first "Flint" since 1924 only took a loss of the amount given. This proves the economy of owning a "Flint."

Customer's Name	Model	1st New E. O. B. Flint	We Altogether	We Sold For	Per Cent Cost to Customer to Drive "Flint" First Year
Fred Lewellyn	55 Touring	\$1495	\$1098	\$1100	26 1/2%
Jane Wirth	55 Touring	1495	1200	1200	20
W. H. Buskirk	55 Touring	1495	1200	1195	20
W. F. Long	55 Touring	1495	1390	1350	7
Paul Ignatowsky	55 Touring	1495	1250	1250	16
N. J. Harrison	40 Touring	1095	1000	1000	8 1/2
A. Hunt	55 Touring	1495	1255	1250	16 2/3
A. Tazelaar	55 Touring	1495	1340	1350	10 1/3
Clarence Knap	55 Sedan	2185	1780	1780	18
Andrew Galaszewski	55 Touring	1495	1100	1100	26
M. V. Cole	40 Touring	1095	938	1000	14 1/2
W. A. Schuler	55 Touring	1495	1100	1100	26
Arthur L. Stowell	40 Touring	1095	1000	1000	8 1/2
Pearl B. Nye	55 Touring	1495	1100	1100	26
K. M. Mark	40 Touring	1095	900	950	17 1/3

Average Cost to "Flint" Customers 17 1/3%

"FLINT" Gives the Greatest Possible Value Per Dollar

## GRAND RAPIDS FLINT CO.

(A Direct Factory Branch)  
Dial 4764 242-244-246 State Street, S. E.

**CITY BRANCHES:**

**OUT-OF-TOWN  
BRANCHES:**

514-528 Stocking Ave.

806 Terrace St., Muskegon

514-516 Division Ave., S.

55 West Eighth St., Holland

806 Cherry St., Cadillac

Main St., Traverse City

Rockford—Ionia

garageman digging up the prospect gives the prospect a card furnished by the Missouri Valley company, which serves as an introduction over his signature. This card received by the Missouri Valley's Used Car department is evidence of the shopman's assistance and is good for a check if a sale is made.

MISSOURI VALLEY AUTO CO.

Attention Mr. Davis:

This will introduce Mr. ....

who is in the market for a good used ....

Please give him your personal attention in the selection of a good used car.

NAME and ADDRESS

GARAGE

We carry from fifty to one hundred good standard used cars at all times. We also carry a large assortment of Fords.

Reverse side of card used by garagemen in sending prospects for used cars to the Missouri Valley Auto Co., Kansas City, Mo. The other side of the card shows a picture of the Missouri Valley's new home and the address.



# SERVICE Sells New Cars HERE

*Personal Contact with Customers,  
Flat Rate Prices and a Guarantee of  
Satisfaction Make Business Grow*

"WE sell the great majority of our new cars through contacts made with prospects in our service department," says B. J. MacMullen, Chevrolet dealer in Santa Ana, California, "and, consequently, we are concentrating our efforts in building up the patronage of this department because we feel that the more owners and drivers we have coming to our service department the more sales we will make."

As evidence that Mr. MacMullen's method of creating sales is a good one, some interesting facts may be presented.

Mr. MacMullen assumed this agency in the middle of the month. The first two weeks on the job were spent in getting squared around. Then business started off well. The first full month showed an increase over the business the agency had formerly been doing. The second month showed a 50 per cent increase over the first month, the third month showed a 100 per cent increase in business over the second month and the fourth month showed a 50 per cent increase over the third month!

How's that for stepping right ahead?

At the time, too, that Mr. MacMullen took over the agency there were two men employed in the service department. Now there are nine men employed in this department and the prospects are that additions must soon be made to the force.

Quite a wonderful record, indeed. And in view of this splendid showing the inquiry naturally arises as to how Mr. MacMullen has done it.

The big thing in building more automobile business, to this dealer's way of thinking, is personal contact. The more personal contact the more owners and drivers and prospects there will be coming into the place of business and the more there is of this sort of thing the greater the volume of sales.

Now there are over 1200 Chevrolet owners in the southern part of Orange county, in which this agency is located, and it is a manifest impossibility to personally call on this number of owners in the short length of time since Mr. MacMullen has been on the job. The next best thing, therefore, is to do what has been done in this case—namely, to send personal letters to all these owners telling them of the change in management, promising them quick and satisfactory service and giving them a cordial and friendly invitation to call.

## *Individuality in Letters*

Each of the letters was individually typed with the owner's name spelled correctly and each of these letters was personally signed by Mr. MacMullen.

When the owners came to the garage, instead of dealing in the service department only with a mechanic or foreman, each was greeted by the sales manager of the agency in person or by one of the salesmen. Each patron of the service department was made to feel perfectly at home and was taken on an inspection of the garage and



if Mr. MacMullen happened to be around the patrons were introduced to him.

In this way two very definite things were accomplished:

The patron's future repair work was practically assured for the shop.

And it was possible to find out whether or not the patron could give the establishment the name of a prospect.

In addition to all this the name and address of each patron of the service department is, of course, secured by the foreman and turned in to the office. Then a personally typed and signed letter is sent to the individual reading like this:

"Dear Sir:

"I am using every effort to make my Shop and Service Station as nearly 100 per cent perfect as possible.

"Inasmuch as you had your car in for service several days ago, I am going to ask you to advise me personally if your work was entirely satisfactory. If not, any suggestions which you may make, will help me in the perfecting of my Service Department, which I am very desirous of doing.

"I will appreciate any information that you may be able to give me, which will be in confidence."

Over sixty per cent of the service shop patrons to whom these letters are sent take the trouble to reply to them.

## *Extensive Advertising*

Coupled with these personal letters, newspaper advertising is used rather extensively.

Repair work is handled in this service shop on either a time basis with labor charged for at the rate of \$1.50 an hour, or on the flat rate basis on such jobs as those with which the shop has had sufficient experience to enable it to know just about what the cost of the job will be.

"We find," says Mr. MacMullen, in discussing the repair shop phase of his business, "that the demand is growing stronger all the time for definite prices in advance of starting repair work. Owners like to know just what the job is going to cost them in advance of starting work or pretty close to what the job is going to cost. We find that where it is impossible to give them a very definite estimate there is always dissatisfaction and the owners, too, are always inclined to kick a little at the price charged them when the work is completed. Here in this shop, therefore, we are constantly striving to get new cost figures which will give us something definite to work on in estimating costs and in being able to extend the range of our flat prices."

# Efficiency on Wheels

## In a BATTERY SHOP

*Practical Speed and Facility Suggestions for Automobile Dealer's Electrical Division Found at Willard Factory Branch, Philadelphia*

**S**PEEDING up battery service in a shop that has a large patronage and maintains a high grade of efficiency, means not only that more customers can be served in a given time, but that all will be better satisfied because of unusually prompt attention to their needs. This point is well understood at the Philadelphia factory branch of the Willard Storage Battery Company, which has marshaled effectively all its resources to bring about this result.

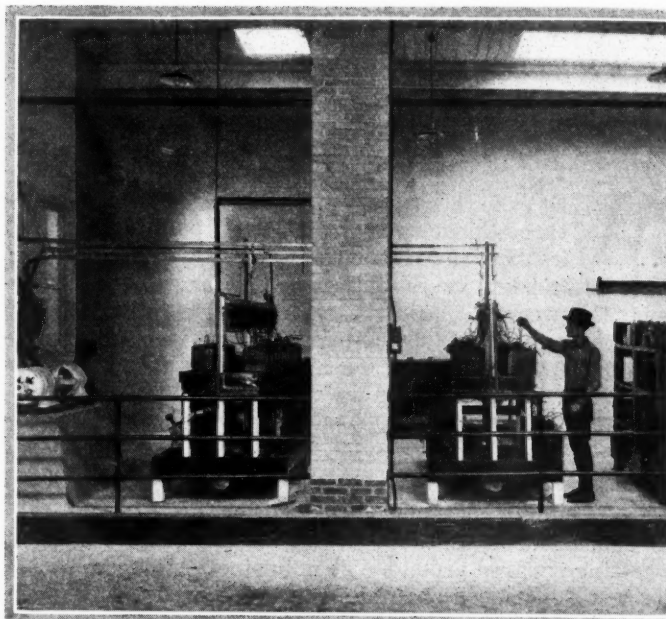
Both a notable rate of speed and a marked lessening of effort are obtained in this plant by putting on wheels all equipment that can thus be handled. In a word, everything is wheeled to the point where it is most needed and in this shop, certain utilities are thus equipped which are seldom or never seen under like conditions elsewhere in the battery business. In some instances where it has been impracticable to place certain heavily loaded racks and other weighty objects directly on casters, these have centered ground-clearance of uniform height so that industrial platform hand trucks may be pushed thereunder, locked by a treadle and the rack, trestle, or whatever it may be, is easily moved to the desired position. Of course, this last-mentioned means of conveying is common in many battery stations.

### *Special Hand-Trucks*

In enumerating the more noteworthy equipment on rollers, mention should first be made of the special hand-trucks of shop construction, designed here and found particularly useful in speeding up work.

These service trucks, as they are called, and of which there are four in constant operation on the service floor, are used in moving customers' batteries and rental batteries to and fro. The customer's battery, for instance, is wheeled from the car to the recharging counter; or if necessary into the repair department. The rental battery is wheeled to the customer's car. These trucks are not only time-savers, but they save effort that would be used in carrying the batteries back and forth by hand and they furthermore reduce dropping and breakage to a minimum.

The trucks are 31 inches high, the same height as that of the recharging counter and run on four rubber-tired casters 4 inches in diameter, making them noiseless, as well as swift. The framework consists of four 2x2 construction timbers connected near the top and bottom by crossbars and two 2x2 timbers extending at a slightly upward angle for handles, bolted together, the stout bolt forming a push-bar for the operator. The back and front timbers slant slightly outward, the connecting rear and side cross-pieces at the bottom helping to box in a shelf-



*In the charging room which is adjacent to the service floor handling has been reduced to notable efficiency. The constant potential recharging machine can accommodate 96 batteries at one time*

like structure to contain a metal pitcher of soda water, jar of vaseline, bottle of distilled water, wire brush and a small whiskbroom with which to clean off battery tops. The table-top of the truck is about 18x28 inches, is of maple and at the end between the handles has fastened to it a locking box for tools.

### *Counter on Casters*

The little counter at which the customers' batteries are received, at the entrance to the shop, is also on casters. The passageway to the shop, which it partly blocks, is rather narrow and this counter may be swung quickly to one side when it is necessary to admit a truck. The counter's being movable permits assistance in loading a large number of batteries at one time, as it can be moved back so that an operator may pass through with a platform well loaded, direct loading on a truck then being made easy. The arrangement saves one handling.

The high-test discharge set, to which batteries are wheeled on the service trucks, to determine whether there is an internal short circuit from rotted separators, sediment from plates, buckled plates, or what-not, or a drop in voltage from a dead cell, low gravity electrolyte, high internal resistance, or whatever cause, also is on casters and it may easily be pulled or pushed over to the movable counter when so desired. It may also be moved to a loaded truck, or wherever a need for it may arise.

The five 40-gallon earthenware acid containers stand on separate crated trestles, a grating being under each. The floor clearance is such that the industrial platform trucks fit underneath, the operator unlocking the apparatus with a treadle as he pushes the platform into the space and locking it before he starts to pull his load. Even the soda barrel and the scrap lead container are on casters in a similar arrangement. Any large racks or trestles of batteries are also conveyed from one point to another on industrial platform trucks.

Having "everything on wheels," however, is not the



## Roll 'Em and Save Time Like They Do in This Well Directed Plant

only means here afforded of speeding up the work. The building, at 3619-3621 Walnut Street, which is a new one especially designed and constructed for the company, is itself laid out with the view of expediting all transactions. It is all on one floor and the service department alone has 5,000 square feet of floor space without a single post to bump into, or circle, or delay operations. It is the largest exclusive battery station in Philadelphia and accommodates sixteen cars simultaneously, without crowding. Another point in favor of time-making is the drive-in direct from Walnut Street, a main thoroughfare. Still another, is that the charging room is adjacent to the service floor, where it is in full view of the customer.

### Large Stock on Hand

Then, too, the company has certain service men whose sole duty is to attend to batteries from the incoming cars. They are always on hand when wanted and do not have to be called, or searched after. And there are plenty of men.

In addition to having enough workmen on hand, each is skilled, not only in handling Willard batteries, but all makes. Every detail of equipment is right and the company sees to it that every device is maintained in perfect working order.

Chances of confusion are cut down as far as possible. There is a special, large rack set aside for batteries that are ready for the customer. So there will be no delays for lack of rental batteries, no less than 240 of them are kept on hand, standing in tiers on racks. These are inspected weekly and given a fresh coat of red paint each week. This easily distinguishes them from any other kind of battery and there is no chance of one getting mixed up with a customer's battery.

So there may be no halting on account of shortage of stocks, there is close and frequent physical inspection, linking up with the records.

Inventory of stock is taken on the last day of each month, after 6 in the evening. Everything in the way



Showing three distinct types of equipment on wheels to speed up battery service. Left: Service hand truck of special shop construction to wheel batteries to and from customers' cars; Center: Recharging counter; Right: High test discharging set

of stock is kept off the floors, so there is no delay by having to walk around or step over such obstacles. All these small points are in the interest of speed in filling orders.

A simple and quick method is used in the service department. The doors leading into the drive-through are wide, so that there is no necessity to stop in order to squeeze by and, conversely, exits are quickly made.

### Customer Agrees to Conditions

The customer, after giving the necessary permission for the work to be done on his battery, signs a triplicate order form agreeing to accept the rental battery conditions printed thereon. The white original is the customer's copy, bearing the tag number assigned to the battery as it was wheeled to the small window between office and service department where that function is performed; the pink duplicate is used as an office record and is filed alphabetically as a cross-check on the name-file. The triplicate is a stiff manila form, used as the shop card and this, like the pink duplicate, bears on its reverse side the recorded result of the gravity and voltage test, the inspection and the record of labor and material used on the job.

When the customer's battery is taken into the shop, it is placed on a special receiving rack. The top connectors are removed and it is steamed and opened with an electric drill. The liquid contents is dumped into a slop acid container and the rest of the work proceeds. When the battery has been repaired and refilled and closed, ready for delivery to the customer, it is placed on another special rack for this purpose.

An unusual feature of the place is a little salesroom on the service floor, partitioned off for privacy. It is away from the noise of incoming and outgoing automobiles and in here the customer is shown samples of the store's complete line of batteries, which he may examine at his leisure.



Industrial platform trucks operated by handle and treadle are used to "put on wheels" such heavy objects as the big crated earthenware acid containers here shown

## New Antisqueak Material

A new solid-woven antisqueak material for use between the metal surfaces of automobiles where they might otherwise rub together and squeak or work loose and rattle has been developed by the L. H. Gilmer Co., of Philadelphia. The Gilmer Company, which has been manufacturing woven antisqueaks since their first use in the automotive industry, claims for this new material that it can be cut, stamped or punched in any desired shape and that patterns can be cut from it in any direction that may be most convenient, without regard to the direction of the warp, and without any tendency for the material to ravel along the cut edges.

The tendency to ravel is overcome in this new material by processing it and treating it with a sealing compound that binds the fibers and prevents squeaking when metal surfaces slide over it. The fabric is then further treated by coating it with graphite on both sides to still further reduce the possibility of squeaking. The material is woven from cotton in one solid piece and is manufactured in various thicknesses without the need of building it up from separate plies of fabric. Because of the manner in which the fibers are sealed in place it is called "sealdedge." The sealing compound also protects the material from rot and increases its wearing qualities.

## No Need for Alarm About Our Future Gasoline

Alarmists who foresee an early exhaustion of the nation's crude oil supply will obtain little comfort from the report of "Committee of Eleven" to the Board of Directors of the American Petroleum Institute. The Committee recently completed an extensive study of the petroleum situation, giving special attention to the possible petroleum supply of the future.

"There is no imminent danger of the exhaustion of the petroleum reserves of the United States," says the report. "It is reasonable to assume that a sufficient supply of oil will be available for national defense and for essential uses in the United States beyond the time when science will limit the demand by developing more efficient use of, or substitutes for oil, or will displace its use as a source of power by harnessing a natural energy."

### A CORRECTION

In the January 14th issue of *MOTOR AGE* an illustration on page 13 showed a handle on the ends of the gasoline tank of the Oldsmobile. The caption stated these handles were regularly provided, but this is not the case since they are used on the exhibition chassis only to facilitate handling of the tank which in this case houses the storage batteries driving the cutaway chassis.

## Winter Months Must Be Profitable, Insists Company Which Celebrates Birthday

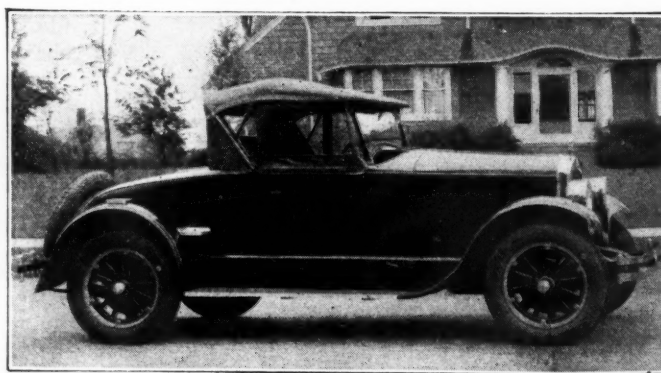


THIS electrically lighted birthday cake, bearing 11 candles, was the central feature of decorations emblemized by the Henshaw Motor Company, Boston, distributor for Dodge Brothers, on the occasion of the company's recent anniversary celebration. The celebration, continuing for a week, was a signal success. Each day saw a large crowd of visitors at the company's establishment, 989 Commonwealth avenue. It was preceded by much promotional effort, including not only newspaper publicity and special invitations to all owners of Dodge Brothers cars and Graham trucks in the territory but post-card reminders to many other owners that they would be welcome.

Two separate days of the week were designated as "Owners' Days," special floral adornments being provided for

these occasions as well as music and other program features. Passenger cars, resale and truck departments all had elaborate showings of vehicles. Various well planned features served to sustain interest throughout the celebration. Of course, one big idea behind the celebration was that of providing a good initial stimulus to business in a season usually regarded as dull. It is a part of the company's merchandising policy to demand that winter sales be held up to their proper ratio, it not being admitted that winter months cannot be made productive and profitable.

While this was the 11th anniversary of the Henshaw Motor Company, it was not the 11th anniversary of C. S. Henshaw, head of the business, as a figure in the automotive world. This happens to be his 31st year in the industry.



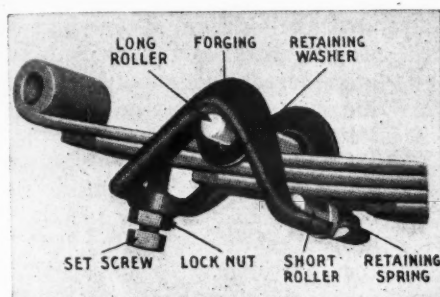
*The Jordan eight cylinder Playboy roadster is now furnished with Glassmobile enclosures at slight extra cost. The car thus equipped is illustrated above.*



# New Spring Control Device Offered

ONE of the largest makers of automobile springs is now ready to offer to car manufacturers and the replacement-accessory trade a new type of self contained spring control device which is characterized by unusual simplicity.

Known by the trade name "Hexdee" and manufactured by the Detroit Steel Products Co., the new spring control device is mounted directly on the springs, its object to increase the amount of interleaf friction and dissipate a greater part of the energy of the initial impulse, thus giving smoother riding through reducing the "up" and "down" travel. On cars equipped with the conventional semi-elliptic springs six of the attachments are necessary. Two "Hexdees" are installed on the front spring one being placed at either end, while only one



*New spring control device brought out by Detroit Steel Products Co.*

placed near the rear end is employed on the rear spring.

A monkey wrench is the only tool necessary to install a complete set of six, the entire operation including the adjustment occupying less than 30 minutes. Once in place no further attention need be paid to them and they can be transferred from one car to another as desired. They may be fitted to any make of car as they are adjustable to various body loadings and are available in five sizes for attachment to springs ranging in width from 1½ in. to 2½ in., the increase in width being ¼ in. on each spring as compared with the next smallest size. Prices have not yet been definitely decided but it is understood the retail list of four "Hexdees" as Ford equipment will be below \$10, while the set of six for other cars will be less than \$15 complete.

Pressure is applied at three points to the end of the springs by a set screw and two rollers which are held in place by a special double "vee" shaped forging. There are only seven parts which in addition to the pieces already mentioned include a retaining washer and spring, and a lock nut. In assembly, the forging with the set screw and nut is straddled over the spring. Next the long roller and washer are set in place with the short roller secured by a retaining spring. After the set screw is tightened, this point acts as an anchor and allows

the rollers to operate as the leaves move. Normal adjustment calls for turning set screw 2½ turns on the front springs and 1½ on the rear.

The heat treated forging is of S. A. E. 1045 steel with the nickel plate rollers of special carbon steel. Laboratory tests show that the three point contact on the "Hexdees" slowly increases the friction which is greatest at the end of stroke and this leaves less energy for the spring to finally absorb and return. To give best results the springs should have the normal amount of lubricant.

## The Single-Plate Clutch

After the leather faced cone clutch had held sway for a number of years in the early automobiles, the metal-to-metal multiple-disc clutch running in oil made its appearance and became popular. The next important step was about fifteen years ago, when the multiple-disc dry clutch was adopted. The third important change came in 1915 with the introduction of the single-plate type, which has solved many perplexing problems, writes E. E. Wemp, clutch engineer of the Long Mfg. Co. in the Journal of the Society of Automotive Engineers.

Ten years ago the automobile industry was well established and demanded better units for less money. At the same time, the car drivers demanded easier operation and, as the single-plate clutch meets both requirements, it came into prominence rapidly, continues the author. No new types have been developed during the last ten years, during which period the advancement has been in the way of refinements of design and developments of materials used in existing types.

The dry multiple-disc and single-plate types of clutch were made possible by development of the asbestos-base friction

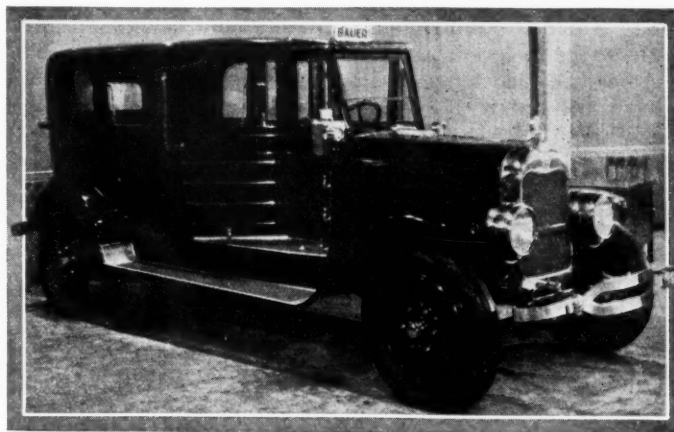


*The distinctive radiator cap ornament of the Stutz car*

facing. A good friction facing in a properly designed clutch should permit smooth flexible engagement over a wide range of speeds and be able to withstand hard and continuous service over a long period.

One of the most interesting developments has been a design of single-plate clutch in which a dense molded type of facing can be used and good clutch engagement obtained. Thermal efficiency is an element in design that has not received sufficient attention, in the opinion of the author, who says that as in pick up the clutch changes horsepower into heat, it is not good practice to house the clutch completely in the flywheel and that openings should be provided to allow air to circulate through the mechanism.

The non-adjustable single-plate clutch has its advantages and its limitations. Its simplicity, ease of assembly and low manufacturing cost are of advantage to the car builder and the non-adjustable feature makes it particularly desirable from the service angle, as it is impossible for an inexperienced mechanic to adjust it improperly.



*This new Bauer Cab with enclosed driver's compartment and larger space for passengers was introduced at the Chicago Show.*

# Prices Sag as We "Stretch Rubber"

## Drop in Cost of Crude Material Followed by Lowered Lists for Motor Vehicle Tires—Tradesmen Sell Economy Necessities

**L**AUNCHING of Secretary Hoover's campaign of tire conservation as a counter-attack against excessive prices of the British crude rubber monopoly was followed swiftly by two important developments.

First—Crude rubber quotations took a decided tumble. Cost of this raw material to tire manufacturers has sagged considerably.

Second—Large tire manufacturers have announced reduced tire prices, declaring lower crude rubber cost has made possible such a revision.

This is exactly the result that Mr. Hoover and leaders in the automotive industry co-operating with him sought to bring about through the tire economy campaign. That is—this is the beginning of the benefit it was hoped to realize.

But the result to date should be accepted only as the beginning, as the first substantial score in the fight. Relaxation of effort in the campaign might conceivably be followed by another upturn in raw rubber quotations with consequential loss of the ground gained thus far in the campaign.

Obviously the trade has been giving the campaign its generous support and it is hoped tradesmen will continue their end of the battle until raw rubber prices are back to the level where they more properly belong and where tire makers will feel warranted in selling tires at a figure making them more easily moved at retail.

Just what the ultimate effect of excessively high crude rubber prices might be is somewhat speculative, although it stands to reason that sky-level costs must be reflected in higher tire prices, that higher tire prices mean to the car owner higher cost of operation and the minimization of his budget for other automotive purchases.

The extent to which this budget is reduced would designate substantially the differential going—not to the tradesman or the American tire maker—but into the coffers of the crude rubber monopoly.

And among possibilities is the not illogical chance that many motorists would economize by doing less driving. Maximum driving is what all elements of the automotive trade want. The more owners use their cars the greater is the trade's opportunity to sell new cars, while maximum driving means maximum demand for parts, servicing and accessories.

You can see a steadily developing tendency in the trade to contrive operating policies which will encourage maximum use of motor vehicles. The business sense of this plan is clear enough and unchallengeable although from a standpoint of intensification it is substantially a new thought.

Frequently today we hear how dealers are changing methods and speeding up shop work in various manners

in order to "keep cars on the road," and any movement to that end is worthy of the united trade's support.

In discussing the possible effects of high rubber costs George J. Burger, secretary-treasurer of the National Tire Dealers' Association, made the following comment:

"First—Eventually, if not at once, it will compel the automobile manufacturer to increase his price on new cars in view of the higher cost paid by the car manufacturer for original tire equipment furnished by the tire manufacturer.

"Second—It will also apply to the bus operators, which through higher operating costs, will eventually mean an increase in fares demanded by the public.

"Third—It will also go a great way in making the truck operator increase his rates for trucking in view of the higher cost of solid tires.

"Four—as to lengthening service of tires through repairs, repair materials will be increased proportionately, meaning higher cost of repair." Such an analysis can be expanded at length.

The situation is one, therefore, which vitally affects the economic status of the American public as well as affecting the economic status of the automotive trade. Whipping this monopoly will keep millions of dollars in circulation at home which otherwise would be diverted into channels across the water.

And in the process of whipping it the alert automotive tradesman has an opportunity to enlarge his own bank balance through the sale of *tire economy necessities*. What they consist of has been outlined in previous issues of this magazine. Every dealer who services tires is or should be amply stocked with the necessary wares—facilitise for making tire repairs, flaps, boots, gages, covers, emergency repair kits, pumps, jacks and the various other items for use in obtaining greater tire mileage.

Enterprising tradesmen who want to make the best of this opportunity must carry the Hoover campaign to the car owner. When it is pointed out that an agency of our national government has urged the trade's participation in this movement as a means of defeating a foreign rubber monopoly and bringing down tire prices to more reasonable levels the car owner, being personally affected and patriotically moved is pretty apt to listen attentively.

Dealers who have new cars for sale should be glad of the opportunity in this movement for the development of possible new car contacts through *tire economy service*. These same contacts offer potential outlets for the sale of accessories and other maintenance work. One of the big secrets of success in this field is bringing as many automobile owners as possible to your place of business. Bring them in, check them up to see what they need and headway is made in the merchandising program.

### Stretch Your Rubber

**T**HE accompanying article is one of a series relating to Secretary Hoover's "Stretch Your Rubber Campaign." The campaign has been indorsed by leading associations in the automotive industry and tradesmen are urged to co-operate. This is America's way of combating the British monopoly's high crude rubber prices that have been necessarily reflected in tires.

In participating in the fight against this monopoly MOTOR AGE has been trying to show the tradesman where he can develop business in the sale of "tire economy necessities." If you deal in or service tires read this article.

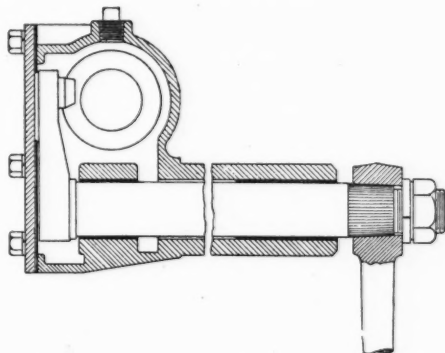


# Ross Brings Out Model R Cam and Lever Steering Gear

SEVERAL changes have been made in the Ross cam and lever steering gear made by the Ross Gear and Tool Co., LaFayette, Ind. The new gear is designated as model R and its construction differs quite materially from the model E which has been used heretofore.

While the general design has been retained a unit type housing has been adopted which prevents any chance of misalignment of the bearings supporting the working parts. In the former model E the trunnion shaft was supported in bearings placed to one side of the worm, while in the new model R gear it is supported in a bearing directly beneath the worm in addition to the other bearing near the drop arm end of the trunnion shaft.

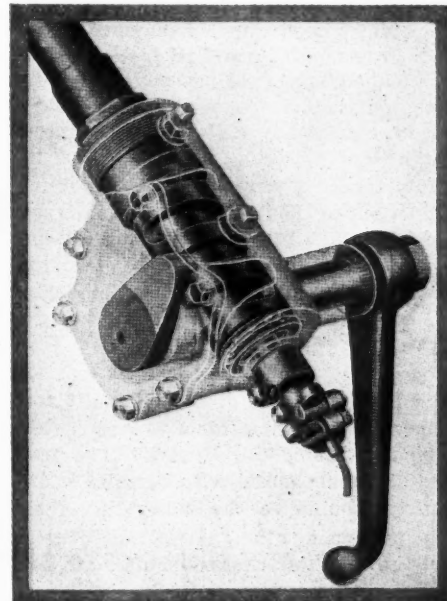
This change has put the trunnion shaft bushings farther apart giving a more rigid support to the shaft and permits the lubricant to go directly to the outermost bearing without first passing through the innermost bearing of the trunnion shaft. The thrust in the trunnion shaft is taken by a hardened and ground steel cover plate under which shims are placed for adjustment of the lever in the worm. Provision is also made in the model R



Sectional view of the Ross model R steering gear, showing the heavier worm and new bearing layout for the trunnion shaft.

gear for adjusting the worm shaft bearings by means of a threaded sleeve or bushing which projects above the worm housing in the form of a hexagon nut.

The distance from the center of the worm shaft to that of the trunnion shaft is the same in the model R gear as the model E, being  $2\frac{1}{2}$  in. The diameter of the worm in model R is  $2\frac{1}{4}$  in. as against  $1\frac{3}{4}$  in. in the former. The thickness of the lever which engages with the worm



Phantom view of the Ross model R steering gear. Adjustment of the worm shaft is made by the hexagon nut at the top of the worm housing.

is  $\frac{7}{8}$  in. in the model R gear, whereas this was  $\frac{1}{2}$  in. in the model E.

## New Stromberg Carburetor for Fords

IN the Ford type carburetor now being brought out by the Stromberg Motor Devices Co. of Chicago, there are a number of features of special interest, these being shown in the illustration.

Fig. 1 shows the aeroplane hinge type of float mechanism which insures positive action and practically eliminates the possibility of flooding. Fig. 2 shows the construction whereby the gasoline enters at the top of the float chamber, which enables it to wash all dirt from the needle valve and seat, thus constituting another precautionary measure against flooding.

In Fig. 3 is shown the construction of the settling chamber where dirt and water accumulation is away from the needle valve where it can not interfere with the proper operation of the carburetor. Fig. 4 shows a common winter practice and illustrates the fact that precautions have been taken to make the top of the float chamber water proof.

Fig. 5 shows the construction which automatically gives a richer mixture for starting and warming up the engine, the needle of this device working in conjunction with the choke valve. Fig. 6 shows

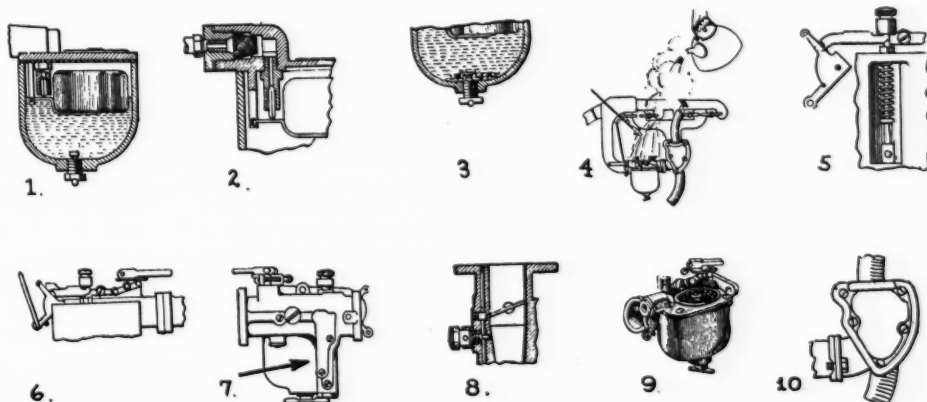
the economizer mechanism which enables the carburetor to operate on the most economical mixture under all driving conditions.

Fig. 7 shows the accelerating well which provides a slightly richer mixture when the throttle is suddenly opened. Fig. 8 shows the two hole idle embodied in this new carburetor, which enables the engine to turn over at very slow speed with the car standing and also en-

ables the engine to throttle down well when the car is running.

Fig. 9 shows the general external appearance of the carburetor which is finished in enamel with polished trimmings. Fig. 10 shows the hot spot which facilitates vaporization of the fuel and consequently increases the engine efficiency as well as reducing crankcase dilution.

The carburetor complete with hot spot lists at \$15.75.



Ten illustrations which portray the features of the new Stromberg Ford carburetor



# New GMC Trucks Embody Passenger Car Features in Cab

**S**TRIKING new frontal design, several important mechanical improvements, and Fisher built steel cabs embodying latest passenger car features, characterize the new heavy-duty line of trucks now being manufactured by the General Motors Truck Co.

This announcement marks the first introduction of new truck models to be made by the consolidated organizations of the truck division of the General Motors Corp., and the Yellow Cab Mfg. Co., of Chicago, which were merged in August last year.

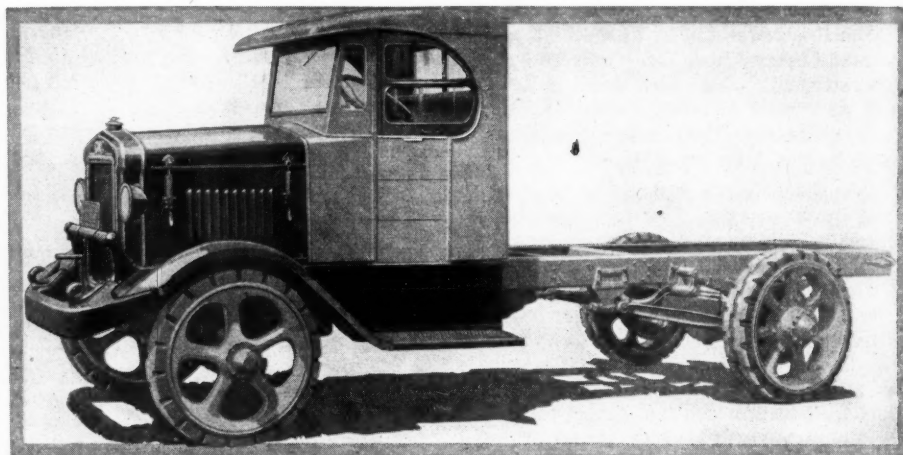
Previously known by the K-72 and K-102 model designation, the 3½ and 5 ton chassis in their new form are marketed under the title of "Big Brutes." The previous 2½-ton chassis with certain modifications completes the heavy-duty line.

In presenting the new "Big Brute" line, the manufacturers lay claim to offering the most completely equipped trucks in their field, specially with regard to the maintenance viewpoint of the owner and the providing of maximum comfort for the driver. In cooperation with engineers of the Fisher Body Corp., a new indestructible all-steel car is furnished as standard equipment on the heavy-duty line at no extra cost. Modern automobile body design has been taken as a pattern for the development of the new cab.

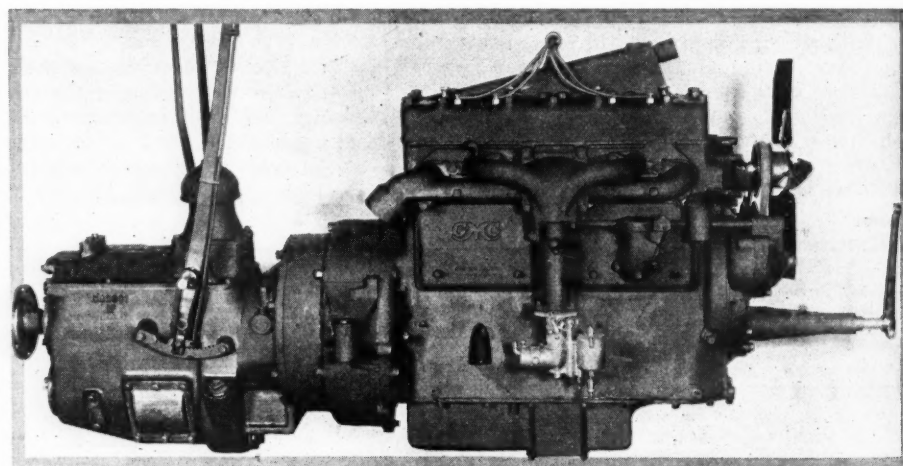
## Special Windshield

A special type of Fisher vision-ventilating one piece windshield is employed which may be opened at the bottom for complete ventilation while in the lowered position, the two inch aperture at the top allows maximum vision in the severest weather. In addition, an automatic windshield cleaner is installed. By continuing the roof over the windshield a sun visor is provided, the lines of which blend well with the general design of the cab.

On either side of the windshield posts, permanent glass windows are fitted while sliding curtains completely enclose the cab when the doors are in position. The latter extending from the seat level to the floor are of the disappearing type which when folded drop into metal pockets below the floor level. In the "down" position, the steel doors are protected from dirt and damage and can be lifted into position easily and in a few seconds. The sliding curtains provided with large windows of Pyralin are carried in metal tracks in the roof of the cab well out of the way when not in use. To allow the driver accessibility to the levers when vertical type hoist bodies



*A view of one of the "Big Brutes" with the sliding and disappearing doors and windows in position. The roof, it will be noticed, is carried forward to form a sun visor.*



*Right side view of the 2½ ton powerplant. Few changes were made in the engine while the transmission underwent several improvements.*

are employed, the rear window is of the double sliding type.

Special attention has been paid to the interior fittings and appointments so that the driver will enjoy maximum comfort when engaged in long haulages. The seat containing Marshal springs and the backs which are of form design are upholstered in a Spanish leather effect Fabricoid. In addition to being adjustable in the vertical plane by 2 in., the seat is formed in two sections to enable quick access to the battery and fuel tank, both of which are located under the seat compartment. Cowl and dash are integral with all instruments mounted in a convenient form on the panel.

To guard against damage from road shocks, the steel cab besides having extra heavy reinforcements at all points of stress, is mounted on the frame in a three point type of suspension with contact being formed through shock absorb-

ing rubber disks held in metal containers.

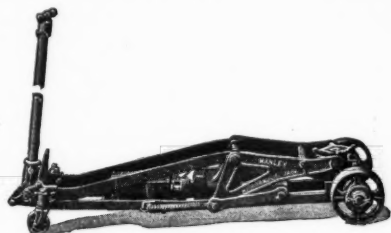
Radiators on both 3-1/3 and 5 ton models have been materially changed to present a new appearance. The shell completely enclosing the core is now made of cast aluminum finished in black enamel but with the encircling bands and GMC trademark contrasting in polished aluminum. In addition to increasing the capacity of the core and improvements in the air flow, the radiator is now carried on rubber shock absorbers to insure longer life.

More power and smoother operation has been secured on the 3½ and 5 ton chassis engine by increasing the stroke length ½ in. so that the cylinder dimensions are now 4½ in. bore by 6½ in. stroke. While the N.A.C.C. rating is unchanged, the maximum power has been increased to 53 b.h.p. and the displacement is greater by 31 cu. in.

# GETTING MORE OUT of the SHOP

## Manley High-Draulic Jack

THE Manley High-Draulic jack recently brought out by the Manley Mfg. Co., York, Pa., can be dropped as low as 5 in. and raised as high as 18 in. This feature naturally makes the jack serviceable for cars equipped with balloon tires as well as cars with standard tires and high differentials. The frame is built on the bridge principle, having compression members at the top and tension members at the bottom. The handle which operates the pump may be operated from the



Manley High-Draulic jack

vertical or horizontal position through 90 deg. It works in any position between these points, allowing it to be used in close quarters and under overhanging bodies.

The cylinder is suspended in a horizontal position between the frames and functions only in its capacity to transmit motion through the piston to the cantilever beam on which the car is raised. The range of travel is so great that it is seldom necessary to adjust the screw on the supplementary pad, which has a 2 3/4 in. adjustment. The jack has a capacity of 5,000 lbs. A needle valve located in the oil chamber controlled by a spring pressure is automatically released when the maximum load is reached. The jack weighs 150 lbs. and with steel wheels is priced at \$48. Equipped with rubber tires the jack sells for \$58.

## St. Pierre Chain Pliers

Ease of operation as well as other advantages are claimed for the St. Pierre Chain Pliers which are manufactured by the St. Pierre Chain Corporation, Worcester, Mass. It is valuable in closing or opening hooks and for removing worn cross chains as well as for attaching new cross chains. In fact it is a useful all-purpose tool for work with tire chains. The pliers, which are drop



St. Pierre chain pliers

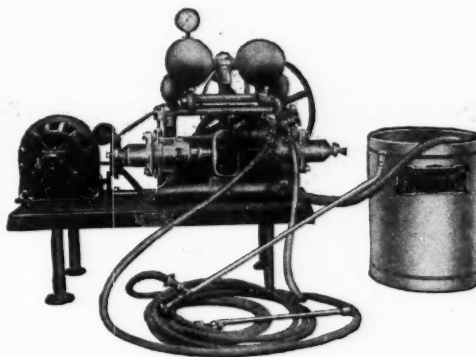
forged, are enclosed in envelopes and packed in display boxes of 12 each, six boxes to a carton. List price \$1.

## Kellogg Rapid Car Washer

The new Rapid Car Washer, made by the Kellogg Manufacturing Co., Rochester, N. Y., comprises a heavy duty compressor, two handy grip guns, and the necessary tanks and equipment, and reduces the time in car washing from a matter of an hour or more to a few minutes. An adjustment, rapidly made by simply twisting the nozzle of the gun, furnishes a stream which may be varied from 250 lbs. pressure, to a thin, fog-like mist.

The ideal method of using the washer is as follows: Two men, each with one of the guns, are employed. The first goes rapidly around the car with a fine spray stream, which loosens the mud and dirt. The second man, armed with a high powered stream, follows directly after the first, quickly and thoroughly removing the loosened dirt.

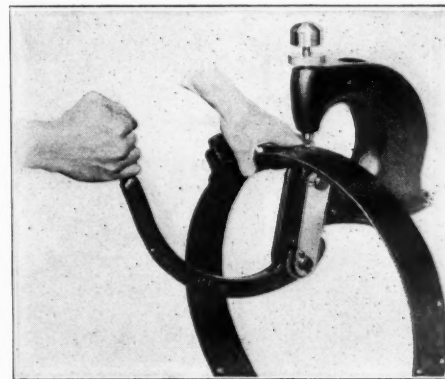
In spite of the fact that the stream is powerful enough to remove the hardest and thickest cakings, it will not injure the finest finish, it is stated.



Kellogg car washer

## Milburn Oil Burner and Preheater

Alexander Milburn Mfg. Co., 1416 W. Baltimore St., Baltimore, Md., is making an oil burner and preheater for heating and straightening bent axles and for preheating welding repair work so as to neutralize expansion and contraction strains. The burner is of the atomizing type, utilizing crude or fuel oil, kerosene or distilled and compressed air of from 50 to 100 lbs. pressure. The air supply line serves two purposes. While furnishing a direct flow to the burner, the air also maintains a similar pressure in the supply tank, creating a greater velocity of oil in the feed line.



New machine for use in brake lining shop

## New Machine for Brake Lining Shops

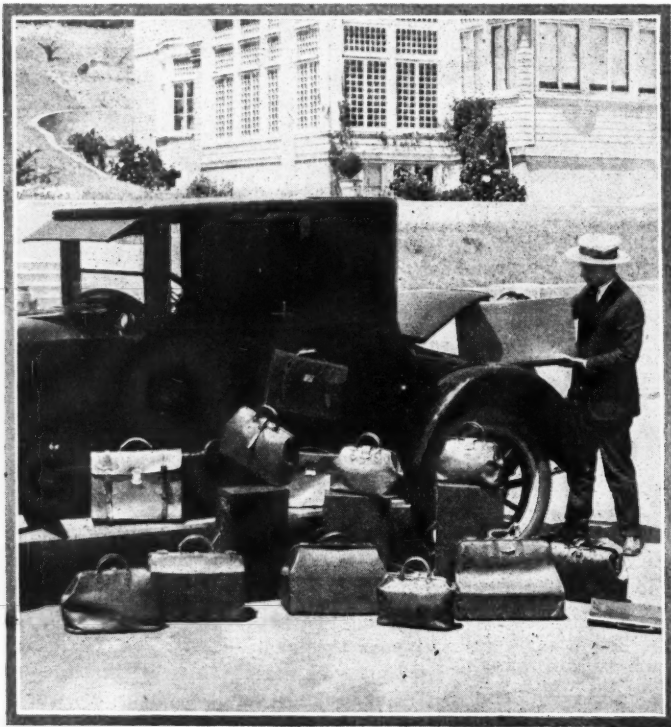
The Penn Rivet Corp., Philadelphia, Pa., have developed a new machine for use in the brake lining shop. When the rivet is in place the brake band is placed in the machine as indicated in the illustration. The lever is then brought down which by means of a toggle point construction forces the rivet up into place, sinking the head below the surface of the brake lining. The amount that the head is sunk is adjustable to suit various thicknesses of lining or varying requirements. Through the upper portion of the device extends the riveting portion of the machine. This is given a sharp blow with a hammer which turns over the edges of the rivet. Rivets made by this concern are not hollow, but are drilled out at the end so that the end turns over readily. At the same time it leaves the main portion of the rivet solid. The machine lists at \$22.50. Aluminum rivets are also made by the Penn Rivet Corporation, the softness of this material preventing any damage resulting, in case the lining wears down until the head makes metal to metal contact. The aluminum rivets are particularly adapted to the application of clutch facing.



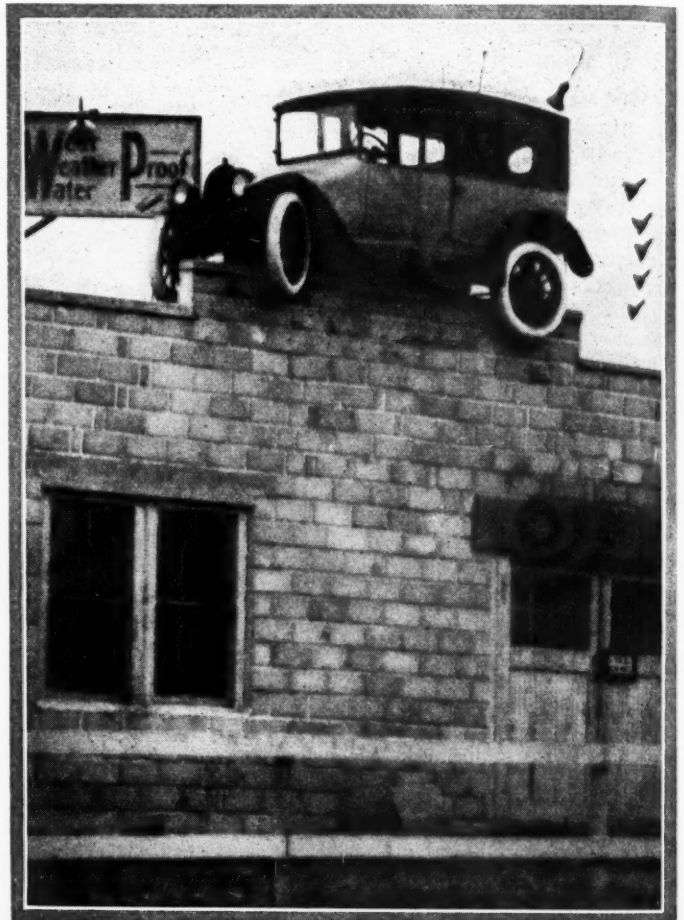
Equipment for heating and straightening axles



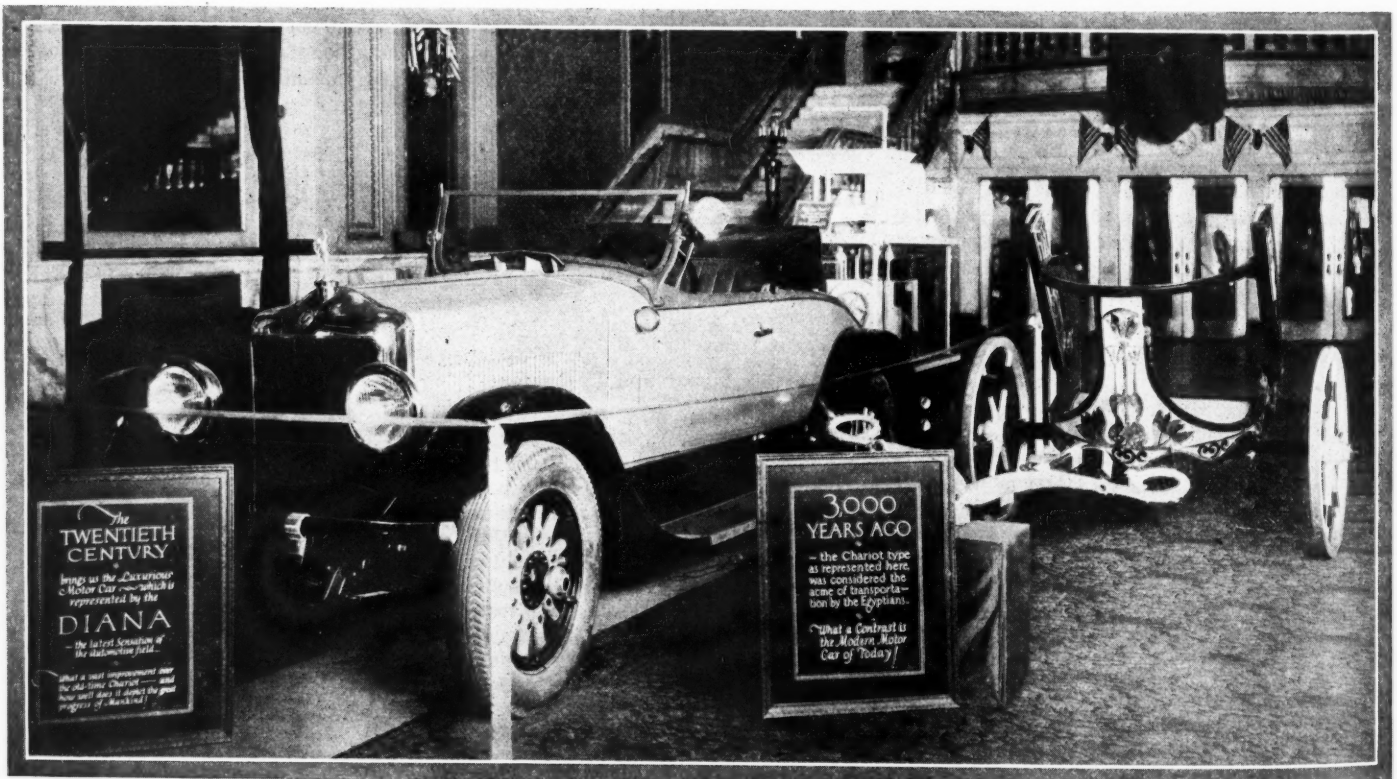
# MOTOR AGE'S PICTURE PAGE



**A CASE OF GRIP.** Above: Charlie Bowman, sales manager of the J. E. French Co., San Francisco, removing the 18th case from Cleveland automobile which carried all of them.



**THE HIGH SIGN.** Right: This is how an ingenious garage owner of Revere, Mass., attracts the attention of passing motorists to his place of business.



**THE OLD AND THE NEW IN TRANSPORTATION.** It is represented by an Egyptian chariot of 3,000 years ago and the Diana Light Straight Eight, a product of the Moon Motor Car Co., on display for 10 days in the beautiful foyer of the Missouri Theatre, St. Louis.



# The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING - ELECTRICAL - FLAT RATES  
SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

## Valuable Data on Hudson Pistons

Q.—We have a 1923 Hudson with aluminum pistons of the split skirt type. This car has been driven about 31,000 miles and has required one or two new pistons every four or five thousand miles to eliminate piston slap. Even when replacing all six of them it is only a short time before one at least will start to slap. The engine has no tendency to pump oil and runs perfectly in every other respect. Rods are aligned every time new pistons are installed, so would welcome any suggestions as to method of getting better mileage from pistons. Cleaning out carbon and using high test gasoline has no effect on this condition.—Foster D. Shaver, 521 Cadillac Court, Toledo, Ohio.

The wear which takes place in pistons and cylinder walls is determined chiefly by the way the car is handled. If the motor is not kept at the proper operating temperature by means of the shutter and if care is not taken to use only high grade oil and if the oil is not changed at regular intervals the piston and cylinder wear will be excessive. The wear is also aggravated if the choke is used excessively or if the carburetor is adjusted to give the motor a rich mixture. Under these circumstances we get a condition which is roughly indicated by the sketch. Where the piston operates up and down in the cylinder the wear will be excessive while at the top and bottom there will be no wear.

Accordingly when a new piston is fitted the clearance is gaged at the place where it enters the cylinder bore and here the fit is tight. When the piston gets farther into the cylinder the clearance becomes much greater and this probably accounts for the condition experienced, where new pistons do not remedy the trouble for any great length of time. The remedy obviously is to have the cylinder blocks reground and new pistons fitted with the proper clearance. Then with proper handling of the engine, suitable lubrication and frequent changing of the oil a much greater mileage should be obtained. Hudson pistons are available in standard size and two oversizes. In the various classifications the exact dimensions will vary slightly and these minute variations are indicated by letters stamped on the top of the piston, there being a different letter for each one half thousandth. The data for the reground and the man overhauling the engine is as follows:

Piston Sizes		
Code	Code	Code
Standard	Oversize	Oversize
D—3.4965	DO—3.5065	DD—3.5165
E—3.497	EO—3.507	EE—3.517
F—3.4975	FO—3.5075	FF—3.5175
G—3.498	GO—3.508	GG—3.518
H—3.4985	HO—3.5085	HH—3.5185
J—3.499	JO—3.509	JJ—3.519

## How to Select Pistons

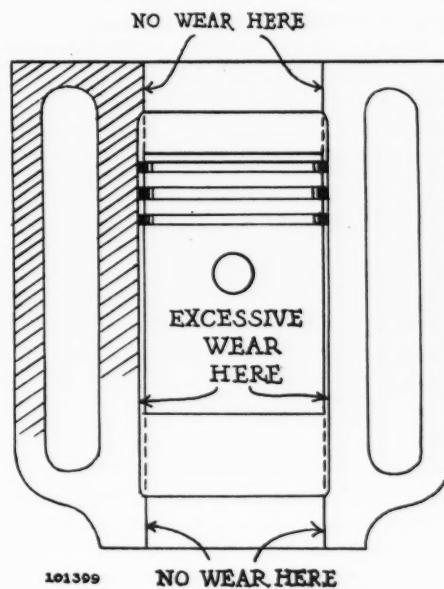
Cylinder bore 3.500	use D or E
Cylinder bore 3.5005	use E or F
Cylinder bore 3.501	use F or G
Cylinder bore 3.5015	use G or H
Cylinder bore 3.502	use H or J
Cylinder bore 3.510	use DO or EO
Cylinder bore 3.5105	use EO or FO
Cylinder bore 3.511	use FO or GO
Cylinder bore 3.5115	use GO or HO
Cylinder bore 3.512	use HO or JO
Cylinder bore 3.520	use DD or EE
Cylinder bore 3.5205	use EE or FF
Cylinder bore 3.521	use FF or GG
Cylinder bore 3.5215	use GG or HH
Cylinder bore 3.522	use HH or JJ

We are indebted for the above information to Mr. Louis Silvus, Service Manager of the Hudson Motor Car Company of Illinois.

## RUNNING A CAMSHAFT BACKWARD

Q.—I am figuring on changing the rotation of a series K Chevrolet camshaft by silent chains and placing camshaft overhead, running it direct from the crankshaft. Can the camshaft be turned in the opposite direction and the motor still be timed correctly. What will the firing order be?—Wyoming Reader.

The camshaft cannot be operated in the reverse direction. When it runs forward the intake valve opens at about the time that the exhaust valve closes. This means that if you ran it in the reverse direction you would draw gas into the cylinder, having the intake cam working properly and timed correctly. However, as soon as the intake valve closes the exhaust valve would open and throw the mixture all out again. If you wish to employ any special construction we would recommend your getting in touch with concerns which specialize on race cars and parts for them.



New pistons will not help with worn cylinders

## New Washer Needed to Hold the Grease

Q.—I am very much interested in your Reader's Clearing House and as you are able to satisfactorily answer questions for others I feel that you can successfully answer mine; I have a 1917 model Dodge Brothers car which has been giving much trouble by grease running from the transmission to the rear end and it is necessary for me to draw this excess grease from the differential. Is there any way that I can stop this grease from running through? Could there be a possibility that too much grease is put into the transmission and differential, thus causing the overflow? Kindly state how much is necessary in each place.—Orvis J. Hartle, Drifting Garage, Drifting, Pa.

Five pints of lubricant are required in the transmission and four pints in the axle. Another way to check up is to fill the transmission up to the level of the reverse idling gear bracket and to fill the differential up to the level of the lower plugs. The measurements given in pints should only be used after the transmission or differential have been thoroughly emptied and washed out.

It is possible that the transmission has been over-filled at some time and that the cork washer at the rear of the transmission has been damaged. To install a new cork washer it is necessary to drop the universal joint at the rear of the transmission. Overfilling and disintegration of this cork washer probably accounts for the trouble you are having.

## TO EXCHANGE IDEAS WITH AUSTRALIA

Over here in Australia some conditions may be different from what they are in the United States, but on the other hand we probably have problems in common. I have worked out several systems of keeping track of prospects for new and used cars in working out plans for a sales and service establishment. I would like to write to dealers in the United States and would like to have letters from any of your Clearing House readers who would care to give me some ideas along business lines. If any of your MOTOR AGE readers would like to write to me about business methods as applied to service and sales, I would certainly appreciate it.—J. K. Jackson, Langside, Arnold Street, Killara, Sydney, N. S. W. Australia.

## TOO MUCH HEAT AS BAD AS TOO LITTLE

Q.—I read the inquiry of Schomberg Garage, of Roxbury, Kansas, in regard to a Buick running after the switch is turned off. This is due to too much heat at the carburetor. We have cured several Buicks by reducing the amount of heat.—Fred Croft, Fred's Service Station, Pontiac, Ill.



# Planning Your New Building

By TOM WILDER

## Country Filling Station with Farm Implements for Side Line

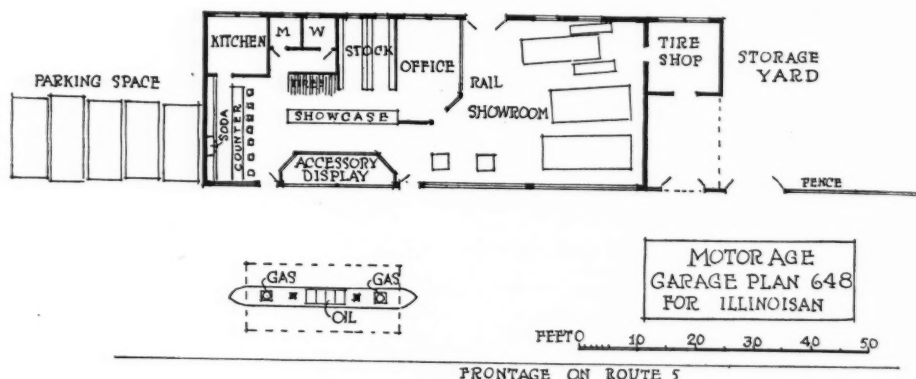
Q.—I am enclosing a sketch showing a possible location for a site for a building I wish to erect. The plot is 80 rds. sq. I would sell gas, oil, a few automobile accessories. Would take an agency for a car and would like showroom for at least two cars. I also sell tractors, milling machines, lighting plants and would like space on display floor for one of each of these, and would also like a wash rack. Would also like space for changing oil in car; change tire on car inside in bad weather and would like to keep the price down around \$2500.

Your issue of June 5, 1924, page 25 gave me the idea of renting one part to parties for a coffee shop and soda fountain. I think this layout looks very good. We can use for material cement blocks, plain face or wood.—Illinois Subscriber.

Your site looks like an ideal location for a layout of this sort. Unless the traffic is all one way from the corner where you turn from road No. 5, we would be inclined to think that the best way for your building to face would be directly opposite this side road. We do not think for a minute that you can put up as much building as you indicate in your letter inside of the price limit. Under ordinary conditions a building such as we have planned would cost about \$4500 and from that up to \$5500 depending upon the location, labor conditions and the material used. To cut the cost down to \$2500 would necessitate making it not much more than a shed, which we think would not be very good policy. We have stretched the building along the frontage about 75 feet, exclusive of the tire shop, which might be in the form of a small extension. This will give the impression of a large place to the motorist on the highway.

We have made no provision for a repair shop other than the tire shop as you say nothing except for tire repair and car washing. The washing would have to be done outside unless a larger building were put up. We have placed the coffee shop and lunch counter as close as possible to the accessories, so that these two departments will help each other in making sales.

We have set the building a little further back from the road than usual, because you have plenty of space and it is always better not to be crowded. If you wish a repair shop we would advise a 60 ft. section with a car doorway in the center. This would give space for three cars on one side of the doorway in repair and four cars on the other side in storage. Tire service could be handled in the aisle.



*This man has unlimited frontage so we have suggested spreading out to get as much display as possible from the road.*

## LEGAL QUESTIONS ANSWERED By WELLINGTON GUSTIN of the Chicago Bar

### A PHASE OF THE WAR TAX

Q.—Is it legal for me to charge one of my sub-dealers more government tax than the factory charges? In other words if I buy a car at a list price of \$1,200, the factory gives me 25 per cent discount and I sell it to my sub-dealer at same list price of \$1,200 but only allow him a 20 per cent discount. Now my net price will be \$900 and government tax at 5 per cent will be \$45.00. My sub-dealer's net price at 20 per cent discount will be \$960, and 5 per cent tax on that will be \$48. Is it legal for me to make the \$3.00 tax off of the sub-dealer, and if it is not legal is there a penalty attached to the law for doing a thing of that kind?—Iowa Dealer.

Since there is but one federal sales tax paid to the government, and since that is passed on as a charge to the ultimate consumer, there appears no reason why any middleman should attempt to make a few dollars by adding on to this tax charge. For where can any dealer or sub-dealer justify his statement to the customer that he must pay the list price plus tax extra, and then add to the amount of this tax?

While this method of charging the sales tax on the price obtained for an automobile may be a general custom, it is obvious that it amounts to a misstatement of fact, for the dealer or sub-dealer is charging more than the tax. While there is no law against one charging whatever price he may be able to get for an automobile, yet it is fraudulent to obtain money by false statements or misrepresentation. Now if you tell

your sub-dealer or ultimate customer that you will sell to him at a price, list, or otherwise, plus tax extra, the tax is a definite figure as paid by the manufacturer. Should you charge more than the tax, as a tax, then the excess may be recovered through action in court.

One dealer interviewed says he collects the tax on the price obtained, which is always more than the actual tax, but says he makes the charge as an extra expense, being so credited. Of course one may make various charges to satisfy his own profits and name his own price at which he will sell a product; but in selling he may not make false statements as to these charges or as to qualities, etc., if they be material, and sufficient to induce the sale without being liable to his customer for damages to the extent of the false statements.

This is treating the subject from the legal standpoint. It seems to me the more important side is the question of policy and good business. Perhaps no sub-dealer or customer would investigate the question of tax, or, at the most, start action to recover overcharges of a few dollars. But should one so investigate and find that the dealer was adding to the tax charge would not the opinion of the customer of his dealer cause a greater loss to the dealer than the amount gained by the extra charge obtained on the tax? This is a question of policy for the dealer to settle.



# Answers to Readers' Questions



## Adjusting Timing Chains On Model 59 Cadillac

Q.—We wish to know how to tighten the timing chains on a type 59 Cadillac automobile.—William F. Estes, Sheffield, Ill.

To determine if chain adjustment is necessary oscillate the fan as far as possible without slipping the fan clutch. If the movement at the periphery of the fan exceeds 1 in. adjustment is recommended. Under no conditions should the car be driven until readjustment is made if the fan movement exceeds 2 in.

Cam shaft sprockets N and L are not integral nor do they bear upon the cam shaft as in earlier eight cylinder construction. The cam shaft sprockets have their bearings and rotate upon eccentric surfaces H and F of the support C.

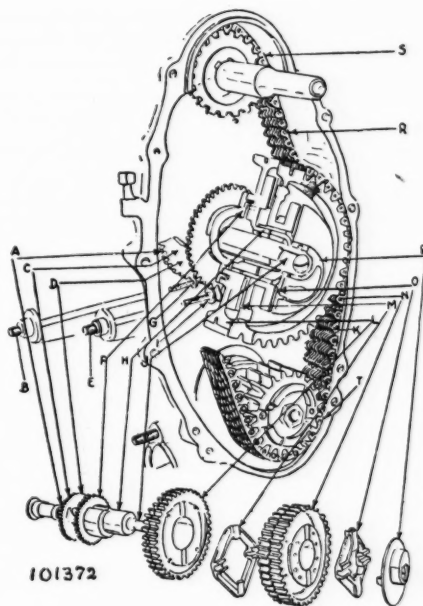
The support C is clamped into the crank case by the locking collar A. The cam shaft J rotates in bearings carried in the support C. Shafts E and B fitted with worm gears I and G meshing with teeth cut upon the flange D of the support C and with teeth cut upon the collar A serves as means whereby the collar A may be loosened or tightened and the support C turned. Turning the support C by the shaft E which may be done after the collar A is loosened by turning the shaft B in a clockwise direction, raises the sprocket N and lowers the sprocket L as these sprockets have their bearings upon eccentric surfaces of the support C.

### Center Distance Increased

In other words, the center distances are increased between the crankshaft sprocket T and the cam shaft sprocket N and between the fan sprocket S and the cam shaft sprocket L. The chains are thus tightened. Cam shaft sprocket N is driven from the crankshaft sprocket T by the chain K. Camshaft sprocket L is driven from cam shaft sprocket N by a universal cross M through lugs on the inner surfaces of these sprockets. Cam shaft J is driven by cam shaft sprocket N through the universal cross O and the driver P. The fan shaft sprocket S is driven from the cam shaft sprocket L by the chain R.

Turn the shaft B six complete revolutions in the clockwise direction. This will loosen the locking collar A screwed onto the inner end of the support C. Turn the shaft E in the clockwise direction sufficiently to reduce the movement at the periphery of the fan to  $\frac{3}{8}$  in. without slipping the clutch at the fan hub. Then turn the shaft B in the counter-clockwise direction, thereby clamping the support C into place.

When chains become so badly worn that readjustment cannot be made, remove the offset link of each chain. Then loosen the locking collar A by turning



101372  
Front end details of model 57 Cadillac

the shaft B six complete revolutions. Turn the shaft E in the clockwise direction bringing the sprockets L and N into positions such that the chains can be replaced. Then adjust the chains.

Chains must always be replaced in pairs. Do not replace one chain only.

### WHEN THE AXLE LEAKS

Q.—Explain how to stop leakage of lubricant from the differential of the Auburn-6-66 and the 8-88. M. D. Leasure, 418 Laurel Blvd., New Castle, Pa.

We assume that you mean leakage of lubricant at the place where the pinion shaft extends forward to the universal joint. At this point there is a lock nut and a jam nut which both have to be loosened and carried forward. Then you will find a dust cap, underneath which is a felt washer. Leakage of lubricant is usually an indication that this washer needs replacing. This may be cut in two and pulled out and a new felt washer may be cut at an angle and slipped into place. Some mechanics prefer to drop the universal joint and take the nut and dust cap off and then replace the felt washer, but it is practically as effectual to cut the washer and put it in place.

### REMOVING ESSEX TRANSMISSION

Q.—Give procedure in removing transmission from an Essex six. G. & J. Stromer, East Main St., Gillett, Wis.

- 1st—Remove the floor boards.
- 2nd—Remove the exhaust pipe.
- 3rd—Disconnect the universal joints.
- 4th—Remove all flywheel cover screws.
- 5th—Remove the screws and bolts fastening the transmission case to the motor.
- 6th—Remove the transmission from the motor.

## Spacer May Be Broken in Pinion Assembly

Q.—I am having trouble with a Stearns Knight No. 6987 in getting end play out of the drive shaft. There is one adjustment on the end of the pinion shaft but this is run in as far as it will go. Is there anything else to do? It still has about  $\frac{3}{16}$  of an inch end play. C. L. Brittain, 177 W. Ely St., Alliance, Ohio.

In the pinion shaft assembly there is a collar which spaces the ball bearing from the roller bearing. This collar is probably badly worn or may be broken. You should drop the universal which is just in front of the axle and then take out the cap screws which hold the flange. This will permit the whole pinion shaft assembly to move forward and you can take it out of the axle. It will then be necessary to put the assembly in a press and press the shaft out of the center cone of the ball bearing. You can then replace the collar which spaces the ball bearing and the roller bearing. The adjustment to which you refer takes care of the original setting when the parts are installed, but is not intended to take up a great deal of wear.

Q.—How do you get the service brake drum off the transmission of the Stearns Knight cars? I had two different pullers and also heated the drum with a blow torch, but had no success.

This drum is sometimes very difficult to get off and in some cases necessitates taking the rear cover plate off the transmission. When this is done the cover plate together with the gears can be put in a press and the press so used as to push the shaft out of the brake drum.

### CHECKING UP ON THE COMPRESSION

Q.—I would like to know of some simple way to tell the compression in the different cylinders of an engine or to get a comparison as to how fast the cylinders leak.—Chicago Mechanic.

There are several types of instruments on the market which enable you to get the compression in pounds per sq. in., but the readings will vary depending on the speed the engine is driven when the readings are taken. However, most of them will give comparative results which is what you need. One method of getting the comparative leakage and also the comparative compression is to use a toy balloon connected to a spark plug shell which is screwed into the cylinder in place of the spark plug. To use this device the engine is turned until the piston is at the bottom of the stroke and ready to come up on the compression stroke. The device is then screwed in place and the crank turned 180 degrees. This will inflate the balloon. The engine can then be left in this position and the size of the balloon will be a measure of the compression while the rapidity with which it becomes deflated will determine the leakage of piston rings and valves.





# Clearing Up Electrical Troubles

EDITED BY A. H. PACKER

## Installing Cutout on a Jordan Model MX

Q.—Would it be possible to install a reverse current cutout on a model MX Jordan? There are two leads running from the generator to the ignition switch and what I would like to do is to use a single lead from the generator through the cutout direct to the ammeter, if such is possible. Kindly illustrate by a wiring diagram.—E. H. Stalz, Meadville, Pa.

We are showing the regular wiring diagram of the car to which you refer. To make the change you will have to get a standard 6 volt cutout such as might be used on a Ford car or any other car equipped with a 6 volt battery. These cutouts usually have two terminals one of which is marked Gen. and the other is marked Bat. The base plate of the cutout is then really a third terminal and must be grounded.

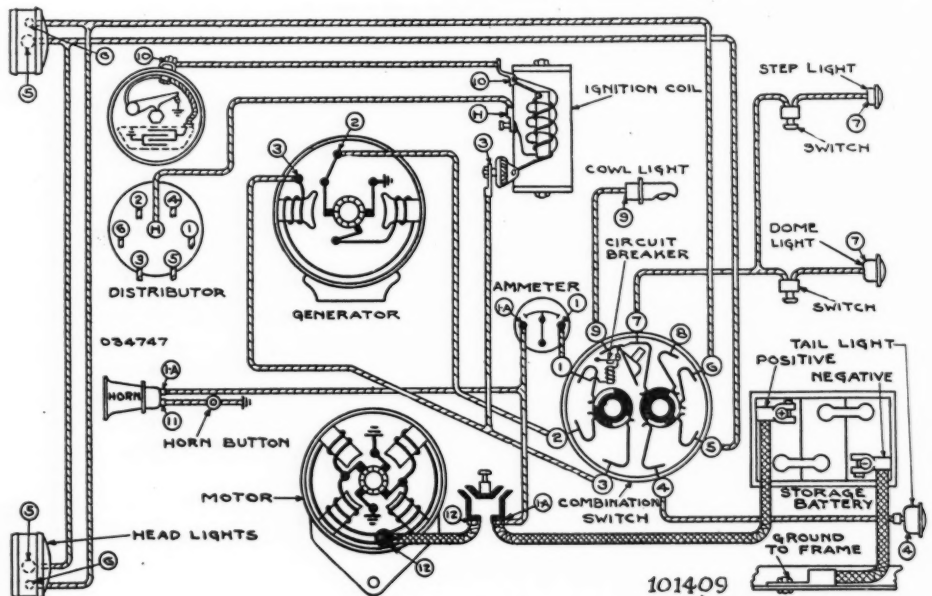
To change over the system take the wire which runs from the No. 2 generator terminal to the No. 2 switch terminal and discard it. Then remove the No. 3 wire from the generator terminal and tape up the end or else cut it off and tape up the rest of the wire. This leaves a wire running from the No. 3 switch terminal to the No. 3 terminal on the ignition coil. When you have gone this far you will have the ignition connected up from the No. 3 switch terminal to the ignition coil while you will have no wires on the No. 2 switch terminal and none on the generator.

Now connect the two generator terminals together and from this junction run a wire to the "Gen." terminal of the cutout. From the Bat. terminal of the cutout run a wire to the No. 1 terminal on the ammeter and then make sure that you have the base plate of the cutout grounded. While we have not made a special diagram for your purpose, we believe that if you follow our instructions carefully and refer to the regular diagram you will have no trouble. If you do please let us hear from you again.

## HE SAW THE POINT—OF THE PLUG

Q.—Here is a suggestion for North Side Auto Repair of Kokomo, Indiana, whose letter you published in the Clearing House section in the Dec. 10, issue. About three years ago we had occasion to write to you about a similar case on an Olds six. You gave us practically the same answer you gave the Kokomo people. Your suggestion about a projecting piece of metal in a cylinder put us on the right track. Here is what we found. The spark plug points were burnt so thin that the explosion caused them to get red hot. New plugs eliminated the trouble entirely.—J. Ruf & Son, Allentown, Wis.

The necessity of replacing all spark plugs at certain intervals is often mentioned. It is usually pointed out, however, that the insulation gradually gives



Wiring diagram for model MX Jordan

From Delco Service Manual

way so that the high voltage is dissipated and is not perfectly effectual in producing a hot spark. The above information shows another reason for replacing plugs, for the spark plug points also deteriorate. Trouble with spark plug points which are so thin as to become incandescent is due to firing of the intake gas as it goes into the cylinder so that the engine spits back into the carburetor and loses power. This is especially noticeable on heavy pulling where the engine tends to run hot and the maximum amount of heat is liberated in the cylinders.

## FUSING THE FORD CIRCUITS

Q.—Will you please advise me through your Reader's Clearing House department the proper size fuse to use on a Ford car to protect the wiring as I am rewiring a car and wish to use fuses in all the circuits except the starter cable. I have all the Clearing House sections of Motor Age for the past two years, but have failed to find this answer.—Frank E. Whedbee, Seabrook, Md.

We believe it would be advisable to use 10 ampere fuses in all circuits. If you fuse the horn circuit this may not be enough depending on the type of horn and how much current it takes. On most horns, however, this should be sufficient. You could use a 5 ampere fuse in the tail light circuit, but we prefer to have the same fuse used throughout, so that there is less bother in replacing them and getting the right ones in the right place. You will also find that a 10 ampere fuse will blow just about as readily as a 5 ampere fuse in case you get a short circuit in the wiring.

## Checking Ford Ignition System

Q.—Give method of testing Ford magneto without removing same from car.—Harry D. Jones, Freeman, Wash.

One method is to use an A. C. voltmeter, but most garages are not equipped with a meter of this sort. Another method is to roughly compare the operation of the engine by first running on magneto and then on battery. If there is end play in the crankshaft it can be determined by comparing the way the engine starts on magneto when a rear wheel is jacked up and when it is not. With a rear wheel jacked up the emergency brake lever may be left in the down position which allows the magnets to be drawn close to the poles of the magneto coils. On the other hand when the lever is in the up position it draws the magnets away from the coils and tends to make the engine start hard if there is much end play in the crankshaft.

Q.—Give method of adjusting Ford coil points so they will have the proper tension to give a smooth running engine and prevent pitting of the points.

This is best done with the alternating current device used in authorized Ford service stations. This consists briefly of portions of the Ford magneto together with an A. C. meter. The tension is considered correct when the coil draws approximately .4 ampere. The tension is adjusted chiefly by means of the U shaped support which holds the vibrating spring rather than by adjusting the nut on top of the coil spring.

# Answers to Readers' Questions



## Steering Gear Adjustment on 1918 Studebaker

Q.—Show cut and adjustment of carburetor used on 1918 four cylinder Studebaker. Marrowbone Garage, Marrowbone, Ky.

In our files we have a Studebaker instruction book for the series 19 which was manufactured in 1918 and the book shows a Schebler carburetor. We also have an additional sheet inserted in this book showing adjustment of the Stromberg carburetor. As you do not state which carburetor is on the car we hardly know which information to give. However, having an extra sheet showing the Stromberg adjustment we are mailing this to you by separate letter and if this is not the one you want, please advise and we will furnish instructions covering the Schebler carburetor.

Q.—Where can I find used parts for this car?

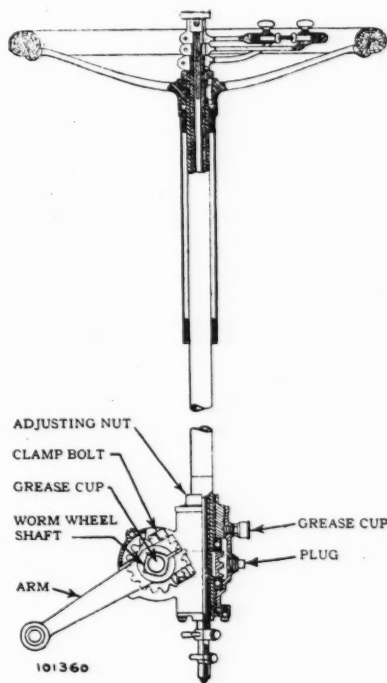
We suggest that you refer to the classified advertising in the last two or three pages of any issue of *MOTOR AGE*. Here you will find concerns which make a business of wrecking cars and selling the parts.

Q.—Show adjustment of steering gear used on the 1918 Studebaker. We want to know how to remove the excessive play in the steering gear of a car which is in our shop at this time.

### How to Take Out Play

We are showing an illustration of the steering gear in question. To take out the play the front axle should be jacked up so that no weight rests on the wheels. The wheel should then be turned to the extreme right, for if adjustment is made with the wheels in the center position it will be found that the steering gear binds when the wheels are turned to either right or left. If the steering column moves up and down, loosen the clamp bolts shown in the illustration and slowly turn down the nut until all the end play is eliminated. Then tighten the clamp bolt again. If lost motion is still excessive examine the cross tube and reach rod connections for wear, also steering arm as it may be that it is loose on the worm shaft.

If looseness is still experienced it can be corrected by turning the worm wheel one quarter way around so that new teeth are engaged with each other. This is done by loosening the clamp bolts shown in the illustration and removing the steering arm. Next turn the steering wheel one quarter around and replace the steering arm and clamp bolts. This will engage entirely new sets of teeth on the wheel and worm gear.



Studebaker steering gear

### SHIMS, GREASE AND DIRT

Q.—I am working on the rear axle and transmission of a Stutz model H, No. 5423. When the collar ball bearing and pinion are assembled on the shaft there remains a space of about 1/32 of an inch. Is this correct?—J. A. Wallis, 1002 Marshall St., Hillsboro, Ill.

This space can be taken up by means of shims of varying thickness available at any Stutz service station.

Q.—I would like to know the right lubricant and the amount to use in the Delco ignition on this car.

Light grease is recommended. In winter 600-W or similar lubricant thinned to flow even when cold should be used. The housing should be filled, but not so full that lubricant will be forced up the ignition shaft.

Q.—Should oil holes be drilled on the under side of the axle shaft tubes on this model H Stutz car?

On this car you should find that the oil holes for draining excessive lubricant from the rear axle are already there. It is likely that they are stopped up with dirt and can be readily cleaned out with a drill or stick.

### I'M NO LONGER BROKE SAYS THE PISTON

Q.—Your answer in regard to the cause of the No. 1 piston head on a 1920 Essex four cylinder car continually breaking was correct. We followed your instructions and have had no trouble since.—Boulder Junction Garage, Boulder Junction, Wis.

We are glad we hit the nail on the head. *MOTOR AGE* readers who are interested in this case which seemed quite puzzling will find the original description of the trouble on page 44 of the February 4, 1926 issue of *MOTOR AGE*.

## Anti-Freeze for Crankcase Moisture

Q.—I would like to have your opinion on the causes of moisture collecting in the crankcase of automobiles in winter, especially on Dodge cars. I have drained oil and have had crankcase thoroughly cleaned, put in new oil and in zero weather have had them freeze over the oil screen so the oil would not work. These cars have been outside all the time. Would bringing a car in a heated garage occasionally help to increase the moisture in the crankcase. Why do some cars give more trouble in this respect than others of the same make. I have had considerable experience with cars, but do not understand the reason for this trouble.—S. R. Brenaman, Lanark, Ill.

The variation between different cars of the same make will be due to the way they are operated and to the condition of the cylinder walls. When the fuel mixture burns, one of the products of combustion is water vapor. The water vapor which goes out through the exhaust does no harm, but the water vapor which passes the piston rings and gets down to the crankcase will immediately condense as it strikes a colder temperature. Even without leakage past the piston rings there is some tendency for the changes of temperature in the crankcase to cause condensation, for when the crankcase is warm the air will contain moisture in suspension which will condense when the crankcase cools off.

We do not believe keeping the car in a warm garage occasionally will make much difference. Frequent changing of the oil is recommended to overcome this condition, together with careful operation to see that the choker is not used any more than necessary. Excessive use of the choker washes the lubricant from the cylinder walls and permits a greater amount of leakage from the combustion chamber into the crankcase. A remedy sometimes recommended is to use about a cupful of denatured alcohol in the crankcase to keep the water which forms from freezing on the oil pump screen. Some authorities on lubrication do not recommend this on the basis that certain acids will be liberated which are detrimental to the polished surfaces of the crankshaft bearings.

### TWO WASHERS BETTER THAN ONE

Q.—Can you tell me what makes the grease come out of the transmission in a 1923 Buick and get into the clutch? What can you do to stop it? I have put a new bearing in the transmission, but that does not stop it. There was no grease washer in the transmission and it did not look as if one should be used. Bert Monroe, 2006 E. Spring St., New Castle, Ind.

There is a steel washer used at the front of the bearing in the transmission. This should stop the grease from working into the clutch, but if trouble is experienced another steel washer of the same kind should be used at the rear of the bearing between the bearing and the gear.



Motor Age's

# FLAT RATE FORUM

Edited by B. M. Ikert

## Manufacturers' Service Manuals Are More Than Mere Price Lists

LONG ago when flat rate was first talked about considerable mention was made of men, methods and machinery, the big three of flat rate. It was repeatedly pointed out that flat rate while in itself useful was to no avail if it could not be properly and profitably applied.

There was more to know than merely the price of a job or the amount of time needed for the job. It was essential to know the logical way of going about the work and the tools and machinery needed.

The first real rub in flat rate came from concerns that could not get under the wire in the specified time called for in a certain job and often lost money on the deal. In nearly every case of this kind the methods or machinery was at fault.

But flat rate systems of today have taken on a decidedly different color and what has been accomplished along the lines of improvements is quite well brought out in a persual of the flat rate manuals which the car manufacturers have recently published for their dealers and service stations. Aside from giving the prices or time schedules for the various operations on the cars these manuals also contain information as to



## THINGS THAT HELP FLAT RATE

The J. E. French Company, Dodge Brothers dealer in San Francisco has placed a price list for all labor operations on an open index that is arranged directly opposite the place where motorists stop for service. This removes all trace of mystery regarding repair costs and makes the prices more accessible for service salesmen, greatly facilitating writing up of repair orders. The index is classified into groups according to the different mechanical units of the car such as Front Axle Group, Engine Group, etc., making it possible quickly to refer to any particular item

how and why the work should be done.

For example, it is one thing to state an operation such as "Tear Down and Reassemble Rear Axle" and which might require 4 hrs. according to the flat rate

schedule, but it is quite another to be able to meet this time schedule.

To do so brings up the subject of men, methods and machinery. The factories have done much towards giving the dealer methods and machinery and the piece work plan of paying men is rapidly making less acute the old problem of "getting the right men." The shops in the smaller towns do not have to cope with this problem quite so much because as a rule the mechanics reside in the town and stick to their jobs pretty closely.

The more pretentious service manuals gotten out by the car manufacturers not only list the time schedules or prices of the operations but also state the procedure in carrying out the work logically so that the time schedules can be strictly adhered to. One of the things in favor of this plan is that it gives to a relatively inexperienced man exactly the steps to take in doing the work. Thus he does not have to guess at which unit to take off first, second, etc. Another thing. These manuals tell him what tools to use, tolerances and clearances to be observed and other information of a general character that is of use.

## FLAT RATES

For

## Cleveland Brake Operations

Motor Age's Flat Rate Forum—No. 52

Manufacturers' Official Designation

	Ov.	Sp.	St.*
850 Free wheel brake mechanism (includes oiling and working all parts connected therewith). (2 wheel brakes).....	1	1	1
851 Same as preceding operation (4 wheel brakes).....	2	2	2
852 Alter foot brake pedal (to fit a physical defect)..... R & R	2½	2½	2½
853 Alter foot brake pedal (to fit a physical defect)..... C & D	1	1	1
854 Remove foot brake pedal.....	½	½	½
855 Install foot brake pedal.....	½	½	½
856 Renew brake release springs (2 wheel brakes).....	¼	¼	¼
857 Renew brake release springs (4 wheel brakes).....	½	½	½
858 Install one brake release spring.....	¼	¼	¼
859 Adjust foot brake pedal (includes removal of floor boards).....	½	½	½
860 Eliminate brake chatter (2 wheel brakes).....	¾	¾	¾
861 Eliminate brake chatter (4 wheel brakes).....	1	1	1
862 Eliminate (one) brake slippage (includes removal and relining)..... R & R	2	2	2
863 Install rear brake equalizing mechanism (includes installation of new cross shafts and brackets, etc.).....	5	—	—
864 Renew brake equalizer bar..... R & R	—	¾	¾
865 Eliminate rattle in brake mechanism.....	1¼	1¼	1¼
866 Rebrush cross shaft brackets (2 wheel brakes)..... R & R	4	4	4
867 Rebrush cross shaft brackets (4 wheel brakes)..... R & R	—	6	6
868 Rebrush cross shaft brackets (2 wheel brakes)..... C & D	1	1	1
869 Rebrush cross shaft brackets (4 wheel brakes)..... C & D	—	1½	1½

\*Ov.—Overhead model; Sp.—Special; St.—Standard.  
(To be continued next week)



# THE MARKET'S NEW OFFERINGS

## Accessories -- Equipment -- Supplies

### Model 1H Mica Plug

THE B. G. Corporation, 136-46 West 52nd Street, New York, is making a line of spark plugs especially designed for heavy duty engine performance. The unit is known as the Model 1H Mica Plug. This plug is made in one and two-piece models, the mica core being inserted solidly in the shell of the one-piece type and in the assembly nut in the two-piece type. The mica core is assembled under pressure with a vulcanizing compound. The insulation consists primarily of laterally wound mica layers and is further reinforced and protected by a series of mica washers hydraulically compressed under two-tons pressure. This construction is said to prevent flaking of the mica and preignition from an overheated particle of the mica insulation. The core is said, further, to be impervious to oil, carbon and moisture so that the plug cannot become permanently fouled. The makers recommend this plug especially for truck and bus operation.



Model No. 1H Mica  
Plug made by  
B. G. Corporation.

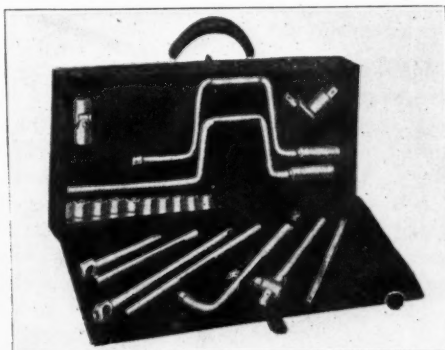
### Zephyr Panels

PRODUCTS formerly known as Pontiac Closed Car Ventilators, manufactured when that name applied by the American Forging & Socket Company, Pontiac, Mich., will be produced and marketed in the future under the name of "Zephyr Panels" by the J. H. Parsons Company, of Pontiac. Announcement to the foregoing effect has been made by J. H. Parsons, holder of the ventilator patents. The Zephyr Panels are made in four sizes to fit all cars. This device under the former name was illustrated and described in MOTOR AGE of March 12, 1925.

### Chart of Radiator Capacities

A CHART showing the radiator capacities of the various makes of cars has been issued by Armour & Company, Chicago, and will be sent on request to garages and filling stations. The chart aids in answering questions as to quantities of glycerine solutions necessary. Pamphlets explaining the adaptability of glycerine and outlining advantages of this substance for anti-freeze purposes are also available from Armour. Armour handles an anti-freeze product known as Armour & Company's Zero-Foe Radiator Glycerine.

February 18, 1926



Walden Service Set No. 28

### Williams Foot Throttle Fits New Fords

WILLIAMS Brothers Aircraft Corporation announces that the Williams Accelerator fits the new Ford models without change in installation, design or performance. In the new Fords floor-board shape as well as pedal design has been altered. Horn and coil box now are mounted on the left side of the engine under the hood. None of these changes interferes with installation or proper operation of the Williams Accelerator, according to the manufacturers. The company is in full production on both accelerator models, the Junior which retails at \$1.50 and the Regular, retailing at \$2.50.

### Walden Service Set No. 28

A SOCKET wrench set which is designed for general service work and which will service all cars is being produced by Walden-Worcester, Inc., Worcester, Mass. This wrench set is adapted to take care of the requirements of small garages and repair shops and all parts and sockets are interchangeable. The set consists of 10 sockets ranging in size from  $\frac{1}{8}$  to  $\frac{3}{4}$  in., long shank speed wrench, short shank speed wrench, long shank tee handle, short shank tee handle, back spin reversible ratchet, combination tee and offset, plug connector, extension bar, socket connector, offset handle and universal joint, all contained in a steel tool box.

### "Little Giant" Tool Box



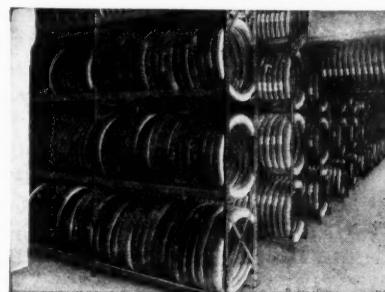
### "Little Giant" Auto Tool Box

IN the Little Giant Auto Tool Box the B. B. Noyes Company, Greenfield, Mass., offers the trade a handy contrivance for use in repairing motor vehicles. The box is 20 by 10 by 15 inches high and has five drawers. The large lower compartment is for larger tools while the sliding drawers are for screws, nuts and other small essentials. The workman may use this box as a seat and as it is on casters he may move it at will. It is made low enough to run under the running board of any car. Price, each, \$3. Packed for the trade in crates of two.

## Additional Accessories on Next Page

### Lyon Tire Rack

KEEPING stocked tires free from dust, dirt and oil and in shape for proper display and handling are some of the advantages which the Lyon Metallic Mfg. Co., Aurora, Ill., says will be found in a tire rack which this company is producing. With the rack in use tires are stored vertically. It has a special tire bar so that tires from 28 in. to 42 in. rest on the rounded face of the bar, thus eliminating danger of the tires being bulged or flattened out. The tire bars can be quickly changed to meet different stock conditions as they are adjustable on  $1\frac{1}{2}$  in. centers. This rack is so built that the dealer may start with a single section and add other sections later.



Lyon Tire Rack

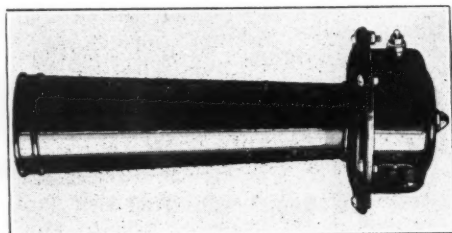
# THE MARKET'S NEW OFFERINGS

## Accessories—Equipment—Supplies

(Continued from Preceding Page)

### The "Northeast"

**N**ORTH East Electric Company, Rochester, N. Y., is in production on a new magnetic horn called the "Northeast." The horn has a strong vibrant tone of exceptional carrying power which has been obtained by blending the fundamental tone of the diaphragm with a higher-pitched overtone. The overtone is tuned one octave above the fundamental, "chording" harmoniously. Simplicity is the note in the horn's construction, operating parts being reduced to a minimum. Contacts are of tungsten and are of the same size and quality as for ignition. The condenser which serves to eliminate arcing at the contacts also is of the standard ignition type and built to withstand many times the voltage impressed across it. To facilitate adjustment of tone, if ever necessary, an adjusting screw is provided in the case which can be operated from the outside without disassembling the horn. Black enamel is the finish. The horn sells for \$7.50.



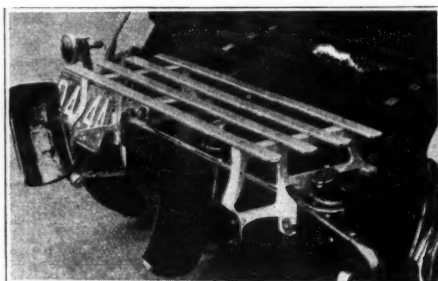
"The Northeast," a New Magnet Horn  
Made by the North East Electric Co.

### New Feature for Timers

**T**HE use of copper for all contacts and conductors is announced as a feature of the new model Turner 2-in-1 Timing Unit, manufactured by the Turner Manufacturing Co., Kokomo, Ind. The sliding contact principle, introduced several years ago by Turner, is retained together with the keystone shaped contact inserts, the "flash-proof" timing disc and the enclosed wiring assembly. Tests have shown that the process used to harden copper, of which the contact inserts are made, permits it to retain the high conductivity native to the metal, but at the same time imparts hardness that resists wear to an unusual degree. The makers say the timing disc possess the same wear-resisting qualities, so that the continued operation of the device does not cause unevenness or roughness on the raceway. This is due to the use of a laminated insulating material which is described as being absolutely "flash" proof and impervious to the action of oil, water or climatic con-

ditions. This material is used on the race, between the contact inserts.

In addition to the contact inserts, the sliding contact brush is now made of hardened copper bronze and the steel rotor which carries the brush, is copper-plated, to provide better conductivity. The wiring assembly, which has always been of high grade copper, is unchanged.



Regent Trunk Rack for Essex Coach

### "Pirmo," an Anti-Freeze

**A** NEW product called Pirmo for use in automobile cooling systems is being placed on the market by Boyce & Veeder Company of Long Island City, New York. This product is said to protect the radiator all winter on one filling, to be harmless, non-corrosive, non-poisonous, and non-combustible. It is said to do no harm to nickel or hose connections or to automobile finishes. It also makes possible the operation of the engine at comparatively high temperature without causing the solution to boil as it does not reduce the boiling point of the water in the cooling system.

### Price's Built-In Coupe Bed

**P**RICE'S Built-In Coupe Bed, a photographic reproduction of which appeared in a previous issue of *MOTOR AGE*, is a facility designed to appeal to the Ford coupe owner who wants sleeping accommodation always at hand. It is a regular full-length comfortable bed with non-sagging, steel springs and a mattress an inch longer than the standard mattress. The mattress also is the full width of the coupe. When in use it gives the sleeper the roominess of practically the coupe body's full length. The back of the seat swings up in a manner to afford a small upper berth for a child or a place for stowing clothing, etc. When not in use the bed is compactly disposed of. Installation is said to affect in no way the appearance of the car and the price installed is \$37.50. Made by the Price Coupe & Auto Bed Co., Los Angeles, Cal.

### Regent Trunk Rack for Essex Coach

**M**ADE by the Regent Manufacturing Company, Manchester, Mass., the Regent Trunk Rack for the Essex coach is an attachment that may be installed without drilling holes. It is constructed to take advantage of holes already present in the chassis. The rack measures 36 in. long and 12 in. wide and will accommodate any standard trunk of approximately these dimensions. A trunk 12 in. wide allows over an inch clearance between the body of the car and the trunk and between the trunk and the spare tire. Retail price, \$12.50.

### Wells Radiator Condenser

**W**ELLS Condenser Company, 172 Chittenden avenue, Columbus, Ohio, is producer of a product known as the Wells Radiator Condenser which the makers recommend for thorough serviceability in both winter and summer. As a winter facility it is claimed the Wells condenser effectively condenses vapors, returning them to the radiator, thus maintaining a mixture of alcohol and water sufficient to prevent freezing. It is said to be effective again in conserving water that otherwise would be lost through evaporation in the summer. The device is distributed by the Imperial Sales Co., 235-36 Clinton Bldg., Columbus, Ohio, and the price is \$5.



Wells Radiator Condenser

### Sized for New Ford Models

**R**AYBESTOS (without wire) for Ford transmissions now is put up in sizes to fit the new Ford models, each box containing one piece 1¾ in. wide, 5/32 in. thick and 23½ in. long. This transmission lining is made of long fiber asbestos the same as the standard Raybestos except that it has no wire. The manufacturer is the Raybestos Company, Bridgeport, Conn.



# EDITORIAL

## Secretary Mellon and the Excise Taxes

SECRETARY of the Treasury Mellon fears a deficit. So he declared when the Senate went on a tax-cutting spree Feb. 10 and lopped off about \$69,000,000 in automotive excises that the secretary thought should stay put.

The Senate cut off the taxes on admissions and dues in the same breath, thereby placing the automotive industry again in the category of "luxuries." Secretary Mellon declared when the smoke had cleared, that he hoped the Senate would reconsider its action, particularly in regard to "taxes on admissions and automobiles."

It may be a luxury for the secretary to ride around in his limousine, but it certainly is no luxury for the great majority of American truck operators to haul coal and ashes and garbage and foodstuffs.

Nor is it a luxury to drive to work in your automobile through crowded city streets. It is a necessity if you expect to get home in time for dinner.

But the secretary fears a deficit. He has been fearing deficits ever since he was appointed by President Harding. Yet every year, there is a surplus, despite the reductions in income taxes that have been made nearly every time Congress is in session.

For the fiscal year 1926, the secretary has estimated the surplus will be \$262,041,756 and for the fiscal year 1927, \$330,307,894, under the present laws. For the pleasure of attending entertainments, America last year paid about \$33,000,000 in taxes and if any so-called luxury taxes are to be retained, it seems logical that these should be kept. But the \$69,600,000 difference in the automotive receipts will not materially affect Mr. Mellon's surplus.

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*A speaker says sales efficiency has only reached 10 per cent efficiency. Say we go after the other 90!*

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## Improving Show Merchandising

THERE is much to commend in the plan of the National Association of Show and Association Managers to give each large sectional show next year a complete working exhibit of shop servicing equipment. Coupled with the organization's other plan looking to improved merchandising exhibits of accessories at these shows a program is in motion which should add materially to the selling value of this particular division of the automotive exhibition.

As the whole idea behind the automotive exhibition is to stimulate merchandising it is desirable to take advantage

of all opportunities promising better selling appeal. There is an opportunity at the show, for instance, that has not been capitalized. The show visitor should be given a more intimate acquaintance with the well equipped shop. Scattered displays of equipment will not sell him so completely on the value of the "well equipped shop" as a working exhibit of such a shop's equipment. There he can better visualize the well equipped shop and if given appropriate literature he will leave the show with a new and more favorable attitude toward the shop which is prepared to deliver the sort of service he has always desired.

There is ample room, too, for improved merchandising exhibits of accessories at the shows. We trust the association of managers and those cooperating with them will mark the weak spots and bring about more effective substitutions. These men have undertaken an important work.

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*With all America tuning in on Hoover's tire economy campaign Britain's monopoly is becoming aware of static.*

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## Windows and Smaller Cities

AN INTERESTING angle of development in the trade is found in the progress in window dressing by dealers in smaller cities and towns. There was a time when the small town merchant told himself that he would have to visit the great metropolitan center in order to see a fine automotive window display. Today, if he only looks around, he will often find windows in his own community that would pass muster anywhere.

In this connection say we take a look at the list of A. E. A. awards for the best 15 windows featuring the idea "Give Something for the Car for Christmas."

First prize went to the Vernon Garage, Vernon, British Columbia, and second prize to the Boller Auto Co., Grand Junction, Colo. Third, sixth and thirteenth prizes went to three of the larger cities but all others, save one, Bayonne, N. J., went to places under 25,000,—Clinton, Okla., Mitchell, S. D., Yakima, Wash., Vincennes, Ind., Sherman, Texas, Morrilton, Ark., Ottumwa, Ia., Bayonne, N. J., Salem, Ore., Plainville, Conn.

There is no reason why the windows in the smaller places cannot be made just as attractive as those elsewhere. At any rate the A. E. A. awards speak volumes for the proficiency of the smaller city merchant along this line.

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*One thing every dealer can sell this year is "America's prosperity." Make the prospect "feel it" and he will feel more like buying.*



# TAX PLANS RELIEVE COST PROBLEMS

## Easing of Steel Price Is Another Favorable Item

### Higher Lists No Longer Expected by Trade with Raw Materials Down

NEW YORK, Feb. 17.—The automobile industry was favored last week by the easing in steel prices, which, coupled with the earlier drop in tire prices, materially relieved the manufacturing cost problem. Another favorable development was with respect to national legislation, as it now appears certain that the tax on trucks will be entirely removed and the car tax reduced to 3 per cent at most, as against the current 5 per cent.

Higher list prices are no longer expected in trade circles, as a result of the lower costs and the reductions made by Ford on closed cars. Whether corresponding downward revisions will be made by other manufacturers of low-priced vehicles remains to be seen, but the sentiment is strong for standing pat on present lists, and placing selling emphasis on quality rather than price.

There has been little change in the general production and sales situation, although the heavy snows in the eastern states have naturally slowed up car sales to a certain extent. On the other hand, the settlement of the coal strike bears promise of a revival of sales in the anthracite regions, which have been virtually out of the market for a long time.

As to the immediate future, the outlook, as many manufacturers see it, is that the greatest increase in buying will come from the industrial centers. There is the possibility that the agricultural sections will come strong later, but forecasts of farm buying are inevitable guesswork to a large degree.

The current prosperity of the car makers is being shared by the parts and accessories producers, most of whom are working at capacity. Foreign sales of all automotive products continue to better last year's level.

#### Miranda Handling Duesenbergs

INDIANAPOLIS, Feb. 15.—The Duesenberg Motors Co. announces the appointment of A. J. Miranda, Jr., as director of the foreign sales division of the company, with offices located at 132 Nassau Street, New York City. Mr. Miranda has had extensive experience in the exportation of high-grade automobiles to foreign markets. The necessity for the establishment of a foreign sales division has been demonstrated in recent months, according to a statement by company officials, by the large number of unsolicited orders and inquiries received from various parts of the world.

#### Davenport Holds Show

DAVENPORT, Ia., Feb. 15.—An automobile show, sponsored by the Davenport Automobile Dealers' Association, opened here February 9 and continued through the 12th. Twenty-three dealers had exhibits on the floor. Forty-four cars were on display representing a value of \$100,000. The highest priced car was on the market at \$5,600, the lowest, \$260. Thirty-one accessory booths were operated.

#### Bendix Promotes McConkey

SOUTH BEND, Ind., Feb. 15.—M. W. McConkey, patent attorney for Bendix Brake Company has been elected vice president and will hereafter have general charge of all legal matters for the company.

#### Johnstown, Pa., to Have Show

JOHNSTOWN, Pa., Feb. 15.—Announcement has been made by the Johnstown Automobile Dealers' Association that the annual motor show will be held from Feb. 27 to March 6, inclusive, which means that the show will be in progress two Saturdays. The exhibit is planned to be held in the new Johnstown Terminal Warehouse building on Maple avenue. With 150 cars to be exhibited and every dealer in the city participating, this year's show will be on a more elaborate scale than ever before, all models shown at the national show to be exhibited here.

## General Motors Declares \$1.75 Quarterly Dividend

NEW YORK, Feb. 15.—General Motors Corp. directors by declaring regular quarterly dividend on common of \$1.75, payable March 12 to holders recorded February 23, have increased regular disbursement on common from \$6 to \$7 per share per year. Regular dividends on preferred and debenture shares payable May 1 to holders of record April 5 were also declared.

Net earnings for 1925 were \$115,980,099. Alfred P. Sloan, General Motors Corp., says: "After deducting preferred dividends requiring \$7,639,991, there remained \$108,340,108, equal to \$20.99 per share of common stock. This includes \$9,509,722, which is the corporation's proportion of the earnings of subsidiary operations, in excess of dividends received. Cash on hand and in banks, together with marketable securities, government and otherwise, at the close of the year, amounted to \$145,142,087."

General Motors last year sold 835,749 automobiles of its five makes. Freight charges on cars and trucks and other production materials were \$57,000,000, against \$42,000,000 in 1924 and \$55,000,000 in 1923.

## Excise on Passenger Cars To Be Cut to 3 Per Cent

### Conference Expected to Reimpose Slash Voted on Floor of Senate

WASHINGTON, Feb. 15.—Senate and House conferees tomorrow will begin their study of the tax slices with a view of eliminating approximately one-fourth of the cuts proposed on the floors of the two legislative branches.

Chairman Green of the House Ways and Means Committee has declared that the aggregate tax reduction should be held even lower than the \$327,000,000 proposed by the House. On Feb. 11 the Senate voted a total reduction of \$456,000,000 in the face of a declaration by Secretary Mellon that \$350,000,000 reduction should be considered the "dead line."

As passed on the floor of the Senate and sent to the conference, the revenue bill removes all taxes from automobiles, trucks, parts and accessories and tires. The bill, when it left the House, carried a 3 per cent tax on passenger cars, but removed the excises on trucks.

Administration leaders regard it as almost certain that the conference committee will reimpose the 3 per cent passenger car tax, adding \$69,600,000 to the potential revenues for the fiscal year.

Should the Senate action be accepted by the conferees, a total of \$149,000,000 would be the tax load removed from the shoulders of the automotive industry.

#### Given Stutz Franchise

FORT WAYNE, Ind., Feb. 15.—O. L. Krauss of this city has been given the agency appointment for the Stutz Vertical Eight automobile. He will act as distributor for twelve northeastern Indiana counties.

#### Fulford Race Planned

FULFORD, Fla., Feb. 15.—Practically the entire operating personnel of the Indianapolis Motor Speedway will be imported here to handle the running of the opening race of the Fulford 1½-mile Speedway on 22. The first Fulford race is a 300-mile event for \$30,000, the cup donated by Carl G. Fisher, and points in the 1926 A. A. A. championship contest.

#### Crouch Is General Manager

EVANSVILLE, Ind., Feb. 15.—As a result of the reorganization of the General Chevrolet Sales company, formerly the Hall-Hagans Chevrolet company, George M. Crouch, former sales manager, has been promoted to general manager and V. M. Hughes to secretary.

## Electric Auto-Lite Co. To Buy Gray & Davis

**Directors of American Bosch  
Approve Deal and Stock-  
holders Will Act April 1**

SPRINGFIELD, Mass., Feb. 15.—A deal in which the Electric Auto-Lite Co. will purchase the starting and lighting business of the Gray & Davis division of the American Bosch Magneto Corp. has been approved unanimously by the directors of the latter company, and is now subject to stockholders' approval at a meeting to be held Apr. 1.

Arthur T. Murray, president of the American Bosch Magneto Corp., stated that the decision had been arrived at after it was realized that the location of the New England company placed it at a distinct permanent competitive disadvantage with western companies. Continuing, Mr. Murray said:

The Electric Auto-Lite Co. offer, which will realize full book value for all tools, dies, inventories, etc., used by the American Bosch Magneto Corp. in the starting and lighting systems manufactured, will enable the latter to concentrate upon the manufacture of automobile accessories, which have been steadily growing in volume, and for which the Springfield plant was originally designed. On these general sales the company can run its Springfield plant at capacity.

Gray & Davis, Inc., will be liquidated, and the \$800,000 7s at the moment outstanding will be retired. The company has already bought in \$200,000 of this issue.

American Bosch will emerge with a working capital increased by \$1,250,000 to \$4,000,000, and with a total worth of well over \$9,000,000. Earnings last year were \$443,000 from magnetos and \$403,000 from general sales, but it lost money in the starting-lighting business. The corporation has no bonds or preferred stock, the property belonging entirely to the common stockholders.

The Poughkeepsie plant, abandoned by the Auto-Lite Co. some weeks ago, when the Dejon business of the company was transferred to Toledo and Fostoria, was sold to the Thompson Radio Corp. for \$225,000. The plant has a site of 30 acres, with brick and concrete structures giving 72,300 sq. ft. of floor space.

### Dodge Bros. Changes Billing

DETROIT, Feb. 15.—Delivered prices quoted by Dodge Brothers dealers in the future will cover the exact list price plus actual freight and tax, and a predetermined handling charge, as a result of a change in factory billing methods. Hereafter dealers will be billed against the bill of lading with the net cost of the car, the actual freight which will be prepaid at the factory, and the tax. This leaves only the handling charge to be added by the dealer.

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### Schwab, II, Distributes Stutz

NEWARK, N. J., Feb. 15.—Charles M. Schwab, 2nd, a nephew of Charles M. Schwab, has taken over the distribution of the new Stutz safety chassis in Northern New Jersey through the Schwab Motor Sales Co. at 1010 Broad Street, Newark.

### Vellie Engine Plant Moved

MOLINE, Ill., Feb. 15.—Seventy-two freight cars were required to move the Vellie Motors corporation's engine plant from Marion, Ind., to Moline. All of this equipment had either arrived in Moline or was en route by February 8 and an augmented force of workers was busy setting it up and arranging the new quarters here for production.

## Fred B. Sides Is Export Manager for Hupmobile

DETROIT, Feb. 15.—Fred B. Sides has been appointed export manager of Hupp to succeed J. H. Teagan, resigned. Mr. Sides has been assistant sales manager



Fred B. Sides

since 1919. He joined the company in 1915, as office manager.

James I. Phillips who has been with the company since 1915 and who has had charge of stores becomes assistant sales manager. Mr. Phillips has been in the automotive industry for 20 years.

Mr. Sides will act as export manager under R. S. Cole, director of exports who joined the company two years ago.

### McDarby Auburn Salesmanager

AUBURN, Ind., Feb. 15.—E. L. Cord, president of the Auburn Automobile Company has just made announcement of the appointment of N. E. McDarby as sales manager for Auburn. Mr. McDarby has been connected with Auburn for several months as assistant sales manager.

## U. S. Tire Makers Show High Average Profit Gain

**Figures Available Show Con-  
cerns Increased Net About  
65 Per Cent in 1925**

NEW YORK, Feb. 15.—Annual reports of tire and rubber companies already available indicate that aggregate net profits in 1925 increased about 65 per cent over 1924. With the controversy over the high price of crude rubber in mind, which was given as the reason for the five tire price increases last year, it is interesting to note that the net profits of six companies rose from \$28,483,450 in 1924 to \$47,691,328 in 1925. Eight companies, including two whose 1924 figures are not immediately available show net profits of \$51,165,512.

It is estimated that high crude rubber increased the British national income \$268,800,000 in 1925, with America paying something like four-fifths of this amount. British rubber plantation total share values rose more than \$1,000,000,000, it is estimated. From 1920 to 1923 most British rubber companies paid no dividends. Last year dividends in some instances were as high as 60 and even 70 per cent.

"When laws prevent sales of a product in hand," says Alfred Reeves, general manager of the N. A. C. C., "the commodity becomes the football of speculators who, in the case of rubber, received the higher prices instead of the growers."

Mr. Reeves again emphasized the fact that the 100 per cent production now permitted under the Stevenson act means merely 100 per cent of the 1920 output and that if all rubber on hand were shipped the total would probably be 120 per cent of 1920 production.

### Studebaker Plan Accepted

NEW YORK, Feb. 15.—C. M. Martindale, secretary of the Home Insurance Co., reports after a trip to Madison, Wis., that Attorney General Ekern, who first disapproved the Studebaker insurance plan, has now approved it as modified for operation in that state. The effect of the modifications is to remove the objection that Studebaker dealers under the plan are acting as insurance agents. As modified the plan requires that, when the dealer so desires, the unpaid balance of the car purchase price will be carried by an acceptance corporation which requires that insurance in a specified insurance concern will be carried on the automobile.

### Correction

It was stated in last week's issue of MOTOR AGE that the new Paige cabriolet roadster was an addition to the "6-72" line. The car is a new model known as the "6-72" in the regular Paige line.



## Seaman Expands Plants To Supply Nash Bodies

**Total of 1,500 More Workers  
to Be Added This Month—  
Output to Reach 700 Daily**

MILWAUKEE, Feb. 15.—Fifteen hundred more men will be added to the present working force of 4,200 by the Seaman Body Corporation of this city, to keep pace with the extremely heavy demand for Nash and Ajax cars, bodies for which are made by the plant.

The plant is being operated on a 24-hour a day schedule, with a daily run of 600 bodies, which is to be jumped to 700, indicating a decidedly increased production schedule at the Nash plant. Popularity of the closed car over the open models and the sales gains made are the forces demanding increased body production.

Instead of five assembly lines as was used last year, there are now seven in operation. Eleven powerful punch presses are being installed and used in the metal body department, speeding up production. To meet the heavy production schedule, workmen on the various assembly lines have been doubled and trebled.

"This is the peak production period in automobile building and indications are that we will build more than 140,000 bodies," Mr. Seaman stated. "We are sure of the spring demand and there is every reason to believe that automobile sales will be greater than ever throughout the entire year."

## P. H. Webber Co. Elects R. S. Webber President

HOOPESTON, ILL., Feb. 15.—The P. H. Webber Co. of this city has reorganized and elected the following officers: R. S. Webber, president; W. H. Webber, vice-president; V. D. Webber, secretary and treasurer. The company, which recently was licensed by P. J. F. Batenburg, Racine, Wis., to manufacture and sell a supercharging type of manifold known as the Bat Manifold for Fords, has also been granted manufacture and sales rights of a manifold for Chevrolet.

Others to follow include the Essex Six, Hudson, Overland 91 and 93, Ajax, Jordan, Peerless, Chrysler. Plans are under way to have manifolds available for additional cars as soon as equipment can be provided.

The Webber Company will confine its business only to cars already in service. All engineering and negotiations with car and engine manufacturers are handled by Mr. Batenburg. The latter also manufactures the Bat Dual Rotary Hydro-Carbon Mixer used in all the manifolds made by the Webber Company. This device is now made with a center plug in some of the sizes, being held in place by a retaining wire.

## New Canada Ford Prices

DETROIT, Feb. 15.—New prices of models announced by the Ford Motor Co. of Canada, Ltd., follow:

Model	New Price	Old Price	Change
Coupe	\$665	\$665	—
Tudor	695	755	—\$ 40
Fordor	755	895	— 140
Runabout	410	395	+ 15
Touring	440	435	+ 5
Light Delivery	435	420	+ 15
Chassis	325	335	— 10
Truck	485	485	—

(Prices do not include starters, which are \$85 extra on all models).

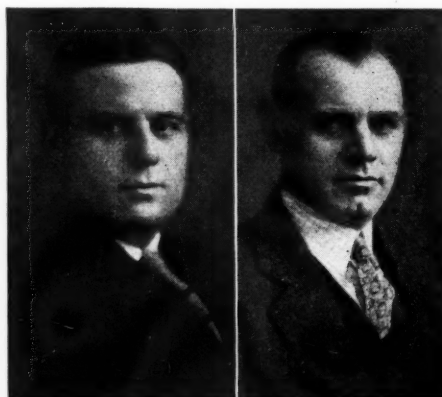
## Illinois A. E. A. Members Meet

CHICAGO, Feb. 15.—All Automotive Equipment Association jobber members in Illinois, outside Chicago, had their salesmen in attendance at an A. E. A. merchandising meeting held at the Abraham Lincoln Hotel in Springfield, Ill. A total of 99 men, representing 13 members, was present. A. Turner, president of the Central Auto Equipment Company, acted as temporary chairman, calling the meeting to order and turning the program over to Arthur R. Mogge, merchandising director of the A. E. A.

## A. E. A. Merchandising Staff Is Augmented

CHICAGO, Feb. 15.—M. D. Graham and Henry Kirkland have been employed as special merchandising representatives of the Automotive Equipment Association, it is announced here by Arthur R. Mogge, merchandising director of the association.

Mr. Graham, before joining the A. E. A., first was service manager for the



M. D. Graham

Henry Kirkland

Briscoe Motor Car Co., then factory representative for the Sparks-Withington Manufacturing Co., and then sales manager for Cumings Brothers, jobbers at Flint, Mich. More recently he was general sales manager of Mosler Metal Products Co.

Mr. Kirkland also was a representative of the Sparks-Withington company, resigning that position to become merchandising specialist for Cumings Brothers. When Mr. Graham left Cumings Brothers, Mr. Kirkland succeeded him as sales manager.

## Denver's Annual Show Results in Many Sales

**Total of 54 Cars, 2 Buses, 3  
Chassis and Number of Spe-  
cial Bodies Exhibited**

DENVER, Feb. 15.—The annual Denver Automobile Show was held in the municipal auditorium under the auspices of the Denver Automobile Dealers' Association, with the following committee in charge: Myron L. Smith, president of the association, and of the Sharman Auto Company, chairman; Kent Robinson, assistant manager Denver branch, Buick Motor Co., vice-chairman; C. M. Hower, of the Hower Advertising Agency, show manager; A. M. Platte, of the Platte-Fawcett Co.; O. L. Davis, Jr., vice-president, the Mountain Motors Co.; A. S. Brodhead, vice-president, Tom Botterill, Inc.; H. M. Allison, president, the Allison Motors Co., and Thomas D. Braden, association secretary.

Twenty-two car dealers had exhibits, showing a total of 54 cars, two buses, three chassis, and a number of special bodies. There were 30 accessory booths. The attendance was approximately 25,000 and the success of the show is marked by the fact that not only was it held without an assessment on the exhibitors, but a comfortable surplus remains in the treasury after paying all costs.

About 100 sales were made on the floor, and many times that number since from leads secured during the show. Invitations had been sent with complimentary tickets to all Rocky Mountain dealers, and many were in attendance as was attested by numerous carload lots sales by distributors.

Among the new cars shown were the Stutz, New Day Jewett, Pontiac, Ajax and Paige, the latter being shown two weeks in advance of national advertising.

Decorations were simple and inexpensive but very attractive, consisting of white drapes overhung with green smilax. Each booth was in an arbor decorated with smilax and large stands of artificial roses were in each booth. A new feature was embodied in the designing of each exhibit by large overhead, illuminated box signs.

## Greenville, N. C., Plans Show

GREENVILLE, N. C., Feb. 15.—The automobile dealers here set April 5 to 9, both inclusive, as the dates for their annual automobile show. Secretary Bartlett said the interest in this show appears to be greater than at any previous time in the history of the industry. This section of North Carolina now is perhaps the best sectional market in the southeastern states for automotive products, according to information gathered by the trade.



## General Motors to Build 25-Story Home in N. Y.

### Many Automobile Concerns Take Floor Space in New Building on "Row"

NEW YORK, Feb. 15.—The 33 automobile and accessory firms occupying the three-story Colonnade Building at 1775 Broadway will continue to do business while 22 stories are added. The upper 13 floors have been leased for 21 years, at \$700,000 per year, beginning May, 1927, by General Motors Corp., and the building will be named "General Motors Building."

Other firms which have taken space include Rolls-Royce of America, Hudson Motor Car Co. of New York, Warren-Nash Motor Co., Rickenbacker Motor Co., American Automobile Association, Metropolitan Automobile Association and Astor Cab Co. General Motors will also occupy the basement.

The building will have a street frontage of 739 feet and a total rentable area of about 520,745 square feet, and will be the fifth largest building in New York City. The location is in the center of automobile row, directly opposite the buildings of the United States Rubber Co., the Goodrich Tire Co. and the Fisk Rubber Co. Nearby are New York headquarters of the Ford Motor Co., Reo, Buick, Packard and Cadillac companies.

General Motors will not only establish its eastern executive and clerical headquarters on the new floors but will arrange for private dining rooms, club rooms, barber shop and a board room seating 40 directors. Dr. John A. Harriss, formerly deputy police commissioner, received \$2,750,000 for the lease of the three-story building. He sold the lease to interests, presumably representing General Motors but acting for Max N. Natanson and Mandelbaum & Lewine. These operators obtained from Jacob Wertheim, owner of the land, a 36-year lease with a 21-year renewal privilege.

## Mayor-Dealer Opens Car Show at Syracuse, N. Y.

SYRACUSE, N. Y., Feb. 15.—Mayor Charles G. Hanna, who is also president of the Syracuse Automobile Dealers' Association opened the eighteenth annual automobile show at the State Armory here.

The show was the biggest ever held in this city and the attendance broke all records. The policy of charging admission has not injured the exposition attendance in any way, C. H. Hayes, secretary of the association declared.

This year there were 121 passenger cars on exhibition, 12 kinds of trucks, 50 accessory exhibits and several motor boat and other engine displays.

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**Has New Used Car Salesroom**  
MILWAUKEE, Feb. 15.—Wisconsin's largest used car salesroom was formally opened for business when the Edwards Motor Co., Dodge distributor and dealer, opened its display of used models at the former Arena Ice Gardens, Thirty-fifth and Wells Street. The converted ice gardens will comfortably hold several hundred used cars with plenty of room for aisle space on four sides of each car. It is located but one block from the new car salesrooms and service station of the Edwards Motor Co. at Thirty-fifth Street and Grand Avenue.

**Harrington Joins Seiberling**  
AKRON, Feb. 15.—R. H. Harrington, who was formerly assistant advertising manager of the Seiberling Rubber Company, has been appointed advertising manager of the American Rubber & Tire Company of Akron, Ohio.

## Ruark Joins Radio Association



B. W. Ruark, formerly assistant to Commissioner Webster of A. E. A. is made executive secretary of Radio Manufacturers' Association

**Yellow Truck Buys Interest**  
NEW YORK, Feb. 15.—According to C. L. Greenbaum, president of Metropolitan Distributors, Inc., a truck operating concern in this city, a large interest in this company has been purchased by the Yellow Truck & Coach Manufacturing Co. of Chicago. Control remains in the hands of Mr. Greenbaum and his associates but Yellow Truck has acquired about one-half the common stock. D. G. Arnstein and I. D. Babcock of the Chicago concern have been elected to the board and also made officers of the New York company. Metropolitan Distributors has been a large buyer of Yellow Trucks.

## Dave Lewis Enters Front Drive Miller in Big Race

### Second Place Winner on Brick Bowl Last Year Comes Back With More Promise

INDIANAPOLIS, Feb. 15.—Dave Lewis, veteran race driver of Los Angeles, has entered a Miller Special front-drive racing car in the Fourteenth Annual International Sweepstakes, to be run at the Indianapolis Motor Speedway May 31.

This announcement, coming before the 500-mile motor classic in 1925 would not—did not, in fact—cause a stir in the automobile racing camps of America and Europe. But coming before the 1926 race it may well cause all drivers of prominence in two hemispheres to bend more closely over their 91½ cu. in. motors in an endeavor to build into them more speed and stamina than usual.

Lewis finished in second place in the 1925 gasoline gallop over the world-famous 2½-mile brick course, just 53.68 seconds behind Pete DePaolo in his Duesenberg Special. Pete's average was 101.13 miles an hour for the 500 miles, while Dave averaged 100.82 in his Junior Special.

Dave came to Indianapolis last year, unheralded and unsung. The fact that he had reached the ripe old age (for a race driver) of 42 years caused track habitués to shake their heads. In addition to his age, Dave was further handicapped—he had a front-drive racer!

This year Dave comes back with another front-drive racer. Mechanics won't shy at helping him. They'll beg for the privilege. Dave won't have to burn the midnight candle—instead he'll conserve his strength.

## Coddington New Head of Charlotte Speedway, Inc.

CHARLOTTE, N. C., Feb. 15.—The annual meeting of the Charlotte Speedway, Inc., resulted in an almost complete reorganization of the corporation. C. C. Coddington, distributor of Buick automobiles in the two Carolinas, was elected president, succeeding C. Lane Etheredge, another prominent automobile dealer.

Coleman W. Roberts, of Greensboro, N. C., was elected general manager and secretary-treasurer, succeeding Osmond Barringer in the former position and B. D. Heath, automobile distributor and business man. Mr. Barringer is one of the pioneers in the automobile business in the Carolinas and has been general manager of the speedway since it was organized two years ago. C. B. Ross, vice-president, succeeds Dr. J. P. Mathe-son.

Members of the board of directors, in addition to the officers, were elected, as follows: I. C. Triplett, George P. Wadsworth and Mr. Heath.

## Ford Wants Town's Name Painted on Dealer's Roof

### Plan Would Greatly Aid Air Pilot in Determining Location Is Belief

DETROIT, Feb. 15.—Edsel B. Ford, president of the Ford Motor Company, has suggested to authorized Ford dealers all over the United States that they paint on the roofs of their places of business the name of their city as guide posts for airplane pilots. Inasmuch as there are Ford dealers in more than 10,000 cities and villages throughout the United States, compliance with this request will constitute an important advancement in the development of facilities for commercial aviation.

Possibilities of such aerial guide posts were demonstrated at the time of the commercial airplane reliability tour last fall when the Ford dealers along the route identified their cities. Reports by pilots of the 17 planes in the tour of the practical value of this identification are believed to have prompted Mr. Ford to make this service available to aviators all over the country in the general interest of commercial flying.

"It seems that one of the very great difficulties of cross country flying is in trying to distinguish over what town or city the pilot is traveling. The motorist is usually advised when approaching a town by appropriate sign boards, but so far the air pilot is not so fortunate," Mr. Ford said.

According to Mr. Ford's suggested plan, the letters of the name will be printed in white of a size which will be visible from ordinary flying height. The name will extend due east and west with the tops of the letters toward the north with an arrow pointing due north at the end of the word. In this way the lettering and arrow serve as a compass to the pilot.

### Hold Annual Luncheon

ROCHESTER, N. Y., Feb. 15.—Sargent-Baker, Inc., Oakland and Pontiac distributors, entertained dealers, salesmen and employees at luncheon at the Powers Hotel. Joseph A. Ellett, Buffalo branch manager and George B. Pettengill, district sales representative of the Oakland Motor Car Company were guests. These get-together luncheons are an annual event inaugurated by Sargent-Baker six years ago.

Mr. Ellett, William Sargent, president; G. W. Sargent, secretary and treasurer, and Harry Fincher, sales manager of the distributing firm, made brief talks touching on sales possibilities of the new Pontiac and Oakland cars.

### Reduce Gear Price

INDIANAPOLIS, Feb. 15.—A reduction in the list price of the Ross Cam and Lever Steering Gear for replacement on Ford cars, from \$15 to \$12, has been

announced by the Ross Gear and Tool Company, of Lafayette, Indiana. The gear lists at \$13.50, west of Denver.

### High Mark for Bills of Sales

COLUMBUS, O., Feb. 15.—One of the biggest months in the filing of bills of sales for automobiles was recorded in January by Harold Gockenbach, Franklin County clerk, where all such bills of sale must be filed. New automobiles registered with the clerk in January numbered 2077 as compared with 627 in January, 1925. Sworn statements which were necessary before cars could be registered numbered 2075 as compared with 379 a year ago. Used cars registered were 5629 in January of this year. Total receipts of the office amounted to \$2841 as compared with \$863 in January last year.

## A. E. A. Mentions 100 More in Window Contest

CHICAGO, Feb. 15.—In addition to the prize-winners already announced in the Christmas window display contest promoted by the Automotive Equipment Association, honorable mention has been awarded 100 dealers in addition to those 15 who won cash prizes totalling \$500, as follows:

Addison Foster, Jr., Co., Darby, Pa.; Alfred Lafoon Motor Co., Cairo, Ill.; Alger & Hirschberg, Gary, Ind.; Alliance Tire & Vulc. Co., Chicago, Ill.; Auto Elec. Service Co., Chicago, Ill.; Ballard and Aldrich, Superior, Neb.; Ballard Motor Sales Co., Bicknell, Ind.; Bennett's Tire Store, Parkersburg, W. Va.; Bernhard & Turner Auto Co., Des Moines, Ia.; Bissell Garage, Syracuse, N. Y.; Boyd Shops, Minneapolis, Minn.; Bostian Motor Co., Independence, Mo.; Brady Motor Co., Lafayette, Ind.; Broadway Service Stn., Buffalo, N. Y.; Brown, M., Chickasha, Okla.; Bohlander, O. J., Fremont, Ohio; Cannon B. Bassett, San Antonio, Texas; Caro Motor Sales Co., Caro, Mich.; Cedartown Motor Co., Cedartown, Ga.; Chambers & Harper, Bloomington, Ill.; Cheeseman & Watson Co., Butler, Pa.; Citizen's Tire Co., Niagara Falls, N. Y.; Colchester Batt. & Vulc. Ser., Truro, N. S.; Colford-Hull Co., Waterloo, Iowa; Cordes Motor Co., Brooklyn, N. Y.

Day, Geo. W., Salem, Ore.; Doll Auto Supply Co., Shreveport, La.; Dotts Motor Co., Curwensville, Pa.; Downings Garage, Littleton, N. H.; Eatonville Motor Co., Eatonville, Wash.; Electric Garage, Brainerd, Minn.; Enfield Norflett Co., Roanoke, Va.; Esser Motor Co., Boomville, Mo.; Evans Motor Co., Columbia, S. C.; Edmonson, A. A., Co., Clay City, Ind.; Fearling Garage, St. Cloud, Minn.; Folke Motor Co., Remsen, Iowa; Fredericksburg Motor Co., Fredericksburg, Va.; French, J. E., San Francisco, Ca.; Gabbert, Ben. Motor Co., Lake Charles, La.; Gorrell Motor Co., Zanesville, Ohio; Haines Flaherty Tire Co., San Antonio, Texas; Hale-Sass Motor Co., Ardmore, Okla.; Harlem Auto Elec. Co., New York, N. Y.; Heisinger Motor Co., Jefferson City, Mo.; Hett, N. E., Auto Supplies, Kitchener, Ont.; Huber Motor Co., Inc., Lake Charles, La.; Hughes, F. W., Co., Charleston, W. Va.; Hunter, J. W., Sharon, Pa.; Junction Service Station, Vancouver, B. C.

Kline's Tire & Access. Store, Dixon, Ill.; Kreitinger Co., Inc., Springfield, Minn.; Kremer Nash Motor Co., Jefferson City, Mo.; Lakewood Flint Co., Lakewood, N. J.; Lamus, Co., Carl, Sacramento, Cal.; McConaha Co., Richmond, Ind.; McGregor Motor Co., Des Moines, Iowa; McMicken Bros., Aurora, Ill.; McQuade, E. W., Trail, B. C., Canada; Markle Motor Co., Minneapolis, Minn.; Mattheis, Richard, Parkston, S. D.; Matthias Garage, Buffalo, N. Y.; Maxwell Motor Co., Stockton, Cal.; Miller Watkins Co., Chico, Cal.; Montana Motor Co., Morley & Hawkins, Hudson, Wis.; Morris Co., Dallas, Texas; Motor Service Co., Raleigh, N. C.; Mount Morris Sales Co., Mt. Morris, N. Y.; Murphy, Joe, San Antonio, Texas; Murray Auto Co., Murray, Utah; Mylecraine, Earl, Philadelphia, Pa.; Nichols Bros., Chickasha, Okla.; Norris-Caldwell Co., New Albany, Miss.

Olympic Auto Supply, Seattle, Wash.; Oneida Elec. Co., Inc., Oneida, N. Y.; Optiz Motor Co., Clarinda, Iowa; Pence Auto Co., Spring Valley, Wis.; Pioneer Rim & Wheel Co., Minneapolis, Minn.; Pinney, Thos. Ltd., Victoria, B. C.; Saquety Garage, Ide Grove, Iowa; Shaefer's Battery & Ig. Co., Hollywood; Standard Tire Co., Aberdeen, S. C.; Stanislaus Auto Supply Co., Modesto, Cal.; Star Vulc. & Tire Co., New York, N. Y.; Thompson, J. W., Springfield, Ohio; Thunder Bay Motors, Ltd., Pt. Arthur, Ont.; Tracey & Co., Inc., Portland, Ore.; Vincennes Nash Motor Co., Vincennes, Ind.; Wabash Valley Motor Co., Lawrenceville, Ill.; Walton Auto Sales Co., Walton, N. Y.; Waterbury Buick Co., Waterbury, Ohio; Wegner Auto Supply Co., Sparta, Wis.; Williams Auto Supply Co., Gadsden, Ala.; Willis-Overland Sales Co., Toronto, Ont.; Whorley, E. S., Middletown, Ohio; Yackie Garage, Philadelphia, Pa.

## Unusually High Output in January for That Month

### First Leg of 1926 Journey Sees Substantial Increases in Retail Business

DETROIT, Feb. 15.—If what has happened during January can be taken as a criterion, then the next six months will be unusually good, and perhaps the best in the history of the industry.

The past month saw production increase over December, witnessed an unusual number of orders for the time of the year and despite automobile shows and threatened price cuts, accessory manufacturers reported better business and retail sales increased.

But one thing marred a perfect picture, that being the used car situation. With some companies this presented no problem, but as a whole it has caused retailers to do some deep study.

Production was higher because certain factories still hear the cry for cars. This is not as strong now as in the spring or summer but exceedingly strong for this time of the year. There is in the opinion of some a fear of over-production but there is nothing to bear this point out. Another reason that might be cited as reason for the high production is the desire of some companies to even out their production curve. It also appears likely that March will be the high production and demand month of the year, another reason why the output was stepped up for the past month.

### W. H. Smith Leaves Ford

DETROIT, Feb. 15.—William H. Smith, engineering counsel for the Ford Motor Company, and for 20 years prominently identified with the organization in various capacities has resigned. He will engage privately as engineering counsel to general industrial interests along the lines of work which he has followed with Ford. Mr. Smith's first connection with the Ford company was in 1901 when he visited Detroit in an attempt to interest Henry Ford in purchasing parts of his car from his company. The offer was turned down but later when Mr. Ford was designing the present Ford models, he called on Mr. Smith for aid in designing various parts.

### Goodrich Branch Moves

ST. LOUIS, Feb. 15.—The St. Louis branch of the B. F. Goodrich Rubber Co. has been moved from Garrison Avenue and Locust Street to 806-08 Spruce Street, where it occupies a five story building with excellent railroad and warehouse facilities. As the branch has no retail dealings it was considered a waste of money to maintain expensive quarters at the Locust street location. The new building also has the advantage of eliminating the necessity of hauling tires from the railroad to the warehouse.



## Ford Reduces Prices On Closed Cars \$20 to \$95

Open Models, However, Are Raised \$20 to \$30—Largest Cut in Fordor Sedan

DETROIT, Feb. 15.—The Ford Motor Company has announced a reduction in the price of closed cars and a slight advance in the price of open models. Reductions range from \$20 to \$95 and increases from \$20 to \$30.

The biggest reduction is made in the price of the Fordor sedan, which is cut from \$660 to \$565, a reduction of \$95. The Tudor sedan is reduced from \$580 to \$520 and the price of the coupe from \$520 to \$500.

In the open type cars the price of the touring car goes from \$290 to \$310 and the runabout from \$260 to \$290. All prices are f. o. b. Detroit.

In making the announcement of the new prices, Edsel Ford, president of the company, said: "Demand for closed cars since the improved types in colors were introduced has been constantly increasing. With a greater output of these types, costs have lessened, and it is the policy of the company to give its customers the benefit of all reductions in production costs."

There will be no change in the prices of the Model T chassis, the Ford ton truck or the Fordson tractor, it was said.

### Phillips Goes to Detroit

DETROIT.—V. G. Phillips, who for several years has been associated with the Yellow Manufacturing Sales Corporation, has been appointed sales manager in charge of Yellow Knight sales, with headquarters at the G. M. C. general offices in Detroit.

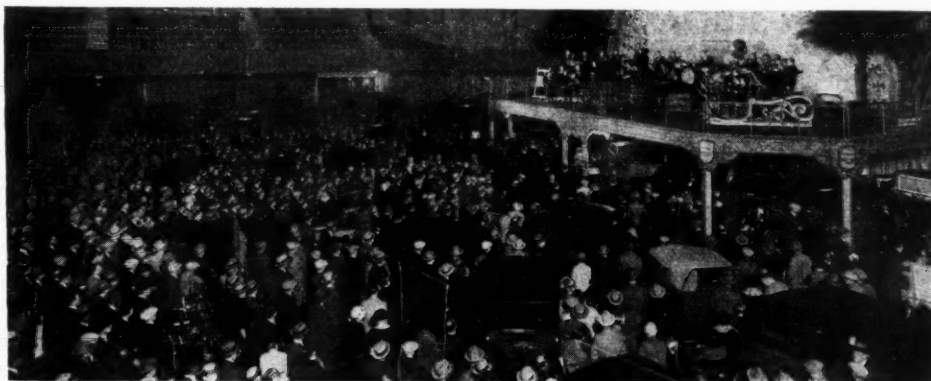
### Little Leaves Ford

DETROIT, Feb. 15.—Thomas J. Little, Jr., has severed his connection as chief engineer of the Lincoln division of the Ford Motor Co. Mr. Little is one of the best known engineers in the automobile industry, both for his contributions to original design and research and for his frequent addresses and writings on automotive engineering subjects. He is president of the Society of Automotive Engineers for the year 1926. He has not formulated plans for the future other than to announce himself as engineering and production consultant at 733 Seyburn Ave., Detroit.

### Plans Toll Road in Mexico

MATAMOROS, Mexico, Feb. 15.—Construction of a toll highway between either Matamoros or Reynosa on the Rio Grande and Pachuca, Mexico, will be started about March 1, according to former Governor C. N. Haskell of Oklahoma. He said that the survey and right of way for the proposed road is nearly finished and that most of the right of way is obtained. The route is via Tampico and through the oil fields of

## Pacific Show Is Seen by 60,000



One End of Pacific Show Interior

SAN FRANCISCO, Feb. 15.—The tenth annual Pacific Coast Automobile Show at the Exposition Auditorium in San Francisco was the biggest and best in the history of the industry on this coast, according to G. A. Wahlgreen, director of the show.

In spite of a drenching rain that continued intermittently throughout the entire week, crowds thronged the Municipal Auditorium to see the new cars and hear Paul Whiteman's orchestra. It is estimated that more than 60,000 persons saw the exhibits.

The draperies and ceiling effect of hundreds of lanterns, combined with Paul Whiteman's famous jazz band made it outstanding as the best show ever held in the west. More than 50 makes of

cars and accessory exhibits were on the floor of the auditorium. Sales throughout the week were fairly good, with prospective buyers in encouraging numbers.

Although the closed car was far in the majority, the interest in open cars and particularly sport models was more than expected by the dealers exhibiting. In contrast to the east it proved to many that the west will always use the open car as well as the closed.

Dealers are looking forward to a rapidly increasing number of sales with the "million dollar rain" that has been soaking California for 10 days and the fact that the public has been given an opportunity to see the new models.

the coast region below that city, thence to Pachuca where intersection will be made with the government highway that is now being constructed between that city and the capitol. Mr. Haskell said that it will be a hard surfaced road and that reasonable tolls will be charged for automobiles and other vehicles. At convenient distances gasoline service stations and hotels will be established, and a telephone line will traverse the road the whole distance of approximately 500 miles.

### Cincinnati Gets Rolls Branch

CINCINNATI, O., Feb. 15.—Establishment of a direct works branch at Cincinnati by Rolls-Royce of America, Inc., is announced by W. H. Hosac, vice-president in charge of sales of the Rolls-Royce company. Bruce T. LaPierre has been appointed manager of the new local branch of the Rolls-Royce organization with temporary quarters at the Hotel Sinton, pending the location of a suitable showroom and maintenance depot.

### Ford Moves to Paris

PARIS, Jan. 28.—(By mail)—Ford's factory at Bordeaux, France, was closed on December 31 and a removal made to new works on the banks of the River Seine, just outside Paris. Owing to river floods the work of removal was con-

siderably delayed, but the factory has now got into production at the rate of 70 cars per day and is expected to be working at full capacity in one month.

### Herbig Joins American Bus

SPRINGFIELD, O., Feb. 15.—Edwin T. Herbig, formerly of the General Motors Corporation with headquarters at Pontiac, Mich., has been appointed sales-manager and publicity manager of the American Bus and Truck Co., it was announced by Gen. C. C. Jamieson, chairman of the board. He took up his new duties at the Springfield plant, formerly known as The Kelly-Springfield Motor Truck Co.

### Barber Leaves Peerless

CLEVELAND, Feb. 15.—Jay W. Barber, branch manager of the Peerless Motor Car Co., Cleveland, for the last 16 years has resigned. It is probable that Mr. Barber will take distribution of some line in this city.

### Nichols Leaves Dodge Bros.

DETROIT, Feb. 15.—J. A. Nichols, Jr., has resigned as vice-president in charge of sales of Dodge Brothers, Inc. Mr. Nichols joined Dodge Brothers in 1914 and has been with the company ever since. He intends to take a vacation before announcing his future plans.

## Fort Worth Plans Spring Car Display March 6-14

**Exhibition Will Be at Same Time as Fat Stock Show And Rodeo Contest**

FORT WORTH, Tex., Feb. 15.—The annual automobile show of the Fort Worth Automotive Trades Association will be held next month during the Fat Stock Show and Rodeo Contest. The dates for the big automobile display are March 6 to 14, inclusive.

Since this is the first and the biggest spring automobile show to be held in the Southwest this year, the automobile dealers from all sections of the state will be here to inspect the latest creations of motor manufacturers.

The local distributors and dealers have arranged to have complete display of all the very newest models of cars. Some of these will be seen for the first time in this section. Every dealer in Fort Worth will have cars on display at the show. The distributors have been working with the dealers for the success of the show and the car makers have promised to send the latest and the best to the exhibition.

The accessory, equipment and parts men of Fort Worth will be well represented at the show. These lines will be displayed in the main show rooms.

Those behind the show this year say it will be the most complete ever staged here. That means in addition to all makes of cars sold in the Fort Worth territory, and the very newest designs at that, there will be a complete line of trucks, accessories, tires, parts, etc., on display during the show.

## January Business Ahead Of December in Denver

DENVER, Feb. 15.—Dealers in standard makes of cars report a greatly increased volume of business for January over January of the preceding year, and even over last December. Several wholesalers report this increase over the preceding month to be as great as 100 per cent in both new and used cars.

This gain is particularly noticeable in Denver and in the Horn district consisting of Greeley, Fort Collins, Loveland, Longmont and Boulder. In Denver, the gain is attributed to a revival in public confidence following the stopping of the financial flurry of early December, when several small banks were closed, and in the agricultural regions heavy snows have filled the reservoirs, and in the excellent beet contracts have been offered by the sugar companies.

Local dealers and distributors predict the keeping up of the pace set for 1926, and the best year yet in the automotive industries.

## Hartford Space Taken

HARTFORD, Conn., Feb. 15.—Local dealers are marking time for the annual motor car show which opens at the Broad street state armory, February 20. All accessories this year will be off the main floor proper, the space gained by putting the accessories in the side rooms off the corridors being employed for car purposes purely. The management reports that all space has been allotted and that more cars will be shown than in former years.

## California Titles Gain

SAN FRANCISCO, Feb. 15.—Registration of automotive vehicles in California totaled 1,475,913 in 1925, according to the annual report of Will H. Marsh, chief of the state division of motor vehicles. This was a gain of 125,154 over the registration of 1924, and puts California very close to New York in registrations. The list is divided as follows: Passenger cars, 1,224,887; pneumatic-tired trucks, 172,280; solid-tired trucks, 42,296; motorcycles, 10,997; trailers, 25,453.

## New Names Attached to Stutz Field Contracts

INDIANAPOLIS, Feb. 15.—Twenty-five distributors and 38 dealers have been added to the Stutz sales organization since the opening of the automobile show season, according to the announcement of F. E. Moskovics, president of The Stutz Motor Car Company. In addition to these nearly as many more contracts are awaiting the scrutiny and approval of the company executives and several hundred applications are on file. This is the grist of the rush that started with the announcement of the new Stutz vertical eight models. Stutz distributors franchises have been awarded as follows:

Stutz Atlanta Motor Co., Fred S. Wilson, manager, Atlanta, Ga.; Arlington Motors Co., Canton, O.; C. L. Hall Indiana Truck Co., Chattanooga, Tenn.; Stutz Sales Co., 1136 Broadway, Denver, Colo.; Walter C. Cameron, Dallas, Tex.; L. F. Mullin Co., 5850 Cass Ave., Detroit, Mich.; Joel D. Charles, Greenville, S. C.; Cesare Vantaggi, Ironriver, Mich.; W. H. Weller, Jr., Jacksonville, Fla.; Automobile Sales Co., Memphis, Tenn.; O. J. Key, New Orleans, La.; Fenton Motor Co., Parkersburg, W. Va.; Lee Motor Co., Pensacola, Fla.; Union Motor Car Co., Portland, Ore.; Springfield Stutz Co., 150 Chestnut St., Springfield, Mass.; Pioneer Automobile Co., Springfield, O.; A. J. Carrier, Toledo, O.; E. C. Harvey, Tulsa, Okla.; Pattison Motors, Inc., Vancouver, B. C.; Hough Motor Company, Washington, D. C.; D. A. Helndel, 1418 Market St., Youngstown, O.; Frank Herbst, Wilmington, N. C.; A. A. Rost, Paris, France; C. Schlatterbeck, Basel, Switzerland. Dealer contracts have been completed with firms in Gloucester, Framington, Brockton, Malden, New Bedford and Lawrence, Mass. Medina, N. Y. Three firms in Chicago. LaSalle, Evanston and Champaign, Ill. Gary, Ind. Newport, Ky. Corsicana, Tex. Santa Barbara and Hollywood, Cal. Greenville, Clarksdale and Greenwood, Miss. Madison, Wis. Montclair, Asbury Park, Paterson, Westwood, Boundbrook, New Brunswick and Redbank, N. J. Uniontown, Pa. Manatee, Tallahassee, St. Petersburg and Lake City, Fla.

## Heavy Used Car Stocks In Southern California

**Retail Supply of Second Hand Vehicles Largest Known In Several Years**

LOS ANGELES, Feb. 15.—Los Angeles and all southern California enters the new year with the heaviest stocks of used cars on hand in years. With the greatest density of car population of any metropolitan center in the United States, the per capita ownership being one car for every 2.7 persons, the used car situation is now in a particularly aggravated condition.

That southern California, although now experiencing very satisfactory business conditions, and with every assurance of continued prosperity, will not be able to absorb as many cars this year as during the past year, with a reasonable profit return to dealers, seems to be the consensus in Los Angeles distributing circles. It is an open secret that during the remaining months of the old year many factories crowded their Los Angeles distributors to increase orders. The result was that, while the added quotas of cars were sold, the market was forced and used car stocks were increased to dangerous proportions. It will be several months before these stocks are satisfactorily reduced, and to accomplish this heavy losses must be incurred.

Southern California can be expected to do a reasonably good automobile business this year. There is no doubt on that score. But, declare several leading distributors, it cannot continue to absorb increasingly larger quotas that must be unloaded by forcing the market, with resulting overloading of used cars and a diminishing profit return.

## Automobile Sales in High Stride for Gotham Trade

NEW YORK, Feb. 15.—With optimism prevailing generally throughout the Metropolitan territory business finds no unfavorable trends for the first month of the New Year. January was slightly more than normally active both in production and consumption of goods, with manufacturers generally following the conservative practice of gaging production in accordance with demand.

In automobile sales the new year has started on high. January car sales were considerably higher than January last year, not only because of the stimulus of record sales at the New York Show, but also because public demand is holding strong. Stocks on hand are not large and the used car market is not causing any abnormal amount of difficulty. Advance orders by car distributors give every indication that with no unexpected setbacks 1926 will be another good year.



## U. S. Motor Taxes in 1925 Amount to \$143,430,708

**Total for Year Compares  
With \$139,201,755 for 1924,  
Revenue Bureau Shows**

WASHINGTON, Feb. 15.—American motor-vehicle owners, during 1925, paid a total of \$143,430,708 in taxes into the federal treasury as compared with a total of \$139,201,755 paid during 1924 it was announced here this week by the Internal Revenue Bureau.

The figures are based on the rate under the old revenue law, being 3 per cent on trucks, 5 per cent on automobiles and motorcycles, and 2½ per cent on tires, parts and accessories. The government figures show that the increase in the sale of automotive products was general throughout the country, according to the comparison by states for 1924.

It is shown that collections from "automobile trucks and wagons" fell off in 1925 when receipts were \$8,359,299.53 as compared with \$10,335,369.14 in 1924 as well as from "tires, parts or accessories" which dropped from \$27,742,764.12 in 1924 to \$23,086,580.22 in 1925, but these losses were more than made up in the gain on "other automobiles and motorcycles" which jumped from \$101,123,621.75 in 1924 to \$111,984,828.80 in 1925.

Michigan, as usual, was the outstanding state in the collections with a total of \$83,286,678.82 as compared with \$77,996,105.51 in 1924, but in 1925 Indiana displaced Ohio for second place with \$8,371,852.01 as compared with \$6,662,665.61 in 1924 while Ohio's 1925 total was but \$7,848,799.36 as compared with \$7,801,076.76 in 1924.

### New Paige-Jewett Dealers

DETROIT, Feb. 15.—The Paige-Detroit Motor Car Company has appointed the following dealers:

C. O. Bruce, Lincoln, Neb., Henry Motor Company, Omaha, C. F. Hardstarfer, Lawrence, Kas., Geo. D. Simonds, Goose Creek, Tex., Geo. F. Leiby, Ringtown, Pa., J. W. Spahr & Son, Dover, Pa., D. J. Leeser, Andreas, Pa., Mullinix & Haines, Gaithersburg, Md., J. J. Brady, Chatsworth, Ill., G. H. Durfee, Paso Robles, Cal., H. E. Neikirk, Fall River Mills, Cal., Dowell & Mallock, Columbia City, Ind., La Fontaine Jewett Sales, La Fontaine, Ind., Charles E. Guerrettaz, Terre Haute, Ind., Leadwood Garage, Leadwood, Mo., Covert Garage, Neshanic, N. J., Jewett Sales & Service, Perrysburg, O., W. S. Pierce & W. H. Dickson, Kingsport, Tenn., Tidewater Motor Co., Inc., Newport News, Va., F. W. Barber, Eagle, Colo., Miners Motor Co., Helper, Utah., Kurz Motor Company, Pennsburg, Pa., Nielson-Koeth Co., Waukegan, Ill., Marmon Richmond Company, Richmond, Va., C. W. Befer, Richmond, Mich., Paige-Jewett Sales Celina, O., Cole & Andrus Motor Sales, Tiffin, O., Kurtz Motor Co., Lewisburg, Pa., Oak Creek Motor Co., South Milwaukee, Wis.

### Divide Dodge Bros. Sales

SAN ANTONIO, Tex., Feb. 15.—The Texas district of the Dodge Brothers has been divided and a branch of the con-

cern will be located here, it is announced by Wroten-Hundley, distributor for this section. The branch factory for Texas has been located at Dallas. The Dallas branch will remain intact, the local distributors said, and the San Antonio branch will take care of the business in south Texas. The manager for the San Antonio branch will be named in a short time.

### Whyte Again Promoted

ST. LOUIS, Feb. 15.—J. F. Whyte, recently appointed retail sales manager of the St. Louis factory branch of the Willys-Overland Co., has been promoted to Wholesales sales manager of the branch. W. O. Kiracofe, branch manager, in making the announcement, said Whyte succeeds O. C. McKinney who has resigned to return to the east. Whyte has been with the local branch for a number of years.

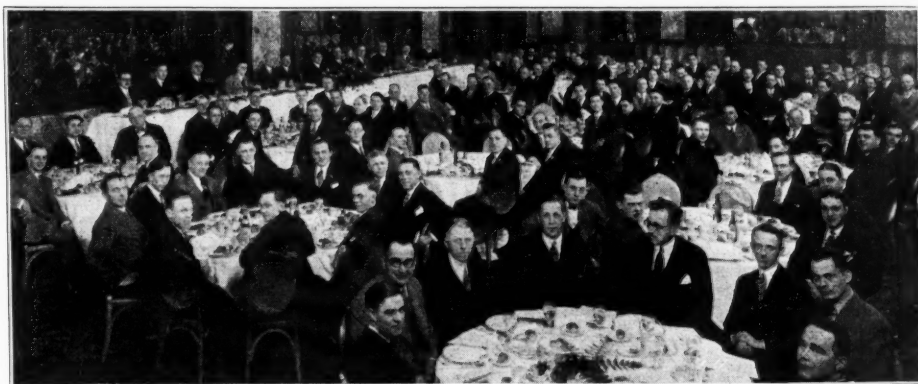
## Boston Dealers Are Much Pleased by January Trade

BOSTON, Feb. 15.—Boston distributors and outside dealers are much gratified at the volume of business done during January in the sale of new cars. The orders have been good in about all price classes. Some of the distributors have been putting in a lot of time to get the new car orders while the weather has been good.

The lure of the new cars following the show talk at New York plus the volume of advertising has lessened the average sales resistance for this time of the year. There are some, of course, who wait always for the Boston show in March before a final decision.

Meanwhile the used cars have not been moving very fast, but the dealers are not worried over them because with lack of usual overhauling work more time can be given reconditioning the tradeins. And with the show only a few weeks away, with Portland, Providence, Springfield, Lowell and other shows intervening, the sales curve is showing a steady upward tendency. There are no very serious troubles in textile or other lines and the spring orders are bright.

## Flint Dealers' Luncheon During Show



Flint dealers at luncheon during Chicago Show at which R. H. Mulch was principal speaker

## Goodyear's Net Profit Almost Doubles in Year

**Figure Is \$21,005,898 as Compared to \$12,161,540 in Previous Twelve Months**

AKRON, Feb. 15.—The Goodyear Tire & Rubber Co. broke all previous records for both volume of business and profits during 1925. Net sales for the Akron, Los Angeles and Canadian companies Los Angeles and Canadian companies and foreign branches totaled \$205,999,829, compared with \$138,777,718 the year before. Net sales, exclusive of the subsidiaries and branches were \$169,470,112 in 1925, against \$115,325,175 in 1924.

After federal taxes, but before interest and other charges, net earnings were \$26,284,672, compared with \$17,363,162 in 1924. Net profit for the year was \$21,005,898, after deducting interest and other charges, against \$12,161,540 in 1924. Before allowing for the special raw material reserve set aside of \$7,500,000, this was equivalent to nearly \$18 a share on the common stock.

The surplus, after allowing for dividends of \$5,655,156, is \$30,649,319, compared with \$22,798,576. There is a contingency fund of \$3,846,950. In 1925 bonds and debentures exceeding \$3,000,000 were retired.

Balance sheet shows current assets of \$68,291,272, and current liabilities of \$10,582,652. Total assets are \$193,237,022.

### More Room for Sales

SEATTLE, Wash., Feb. 15.—Addition of a new building, commodious and exceedingly well appointed was announced by Gardner Motors of Washington, state distributors for Gardner cars. The new building adjoins the present Gardner building and is located at 1508-12.

The used car department will be under the supervision of A. W. Blair, who was formerly connected with one of the largest used car companies in the city. He will have associated with him G. F. Dunn and S. Care of Portland.

## Planes Will Be Exhibited At Los Angeles Car Show

### Management Feels Interest in Commercial Flying War- rants Admission

LOS ANGELES, Feb. 15.—The commercial airplane is to take its place alongside the automobile for the first time in a Western automotive show when the annual Los Angeles exhibition opens on February 20. Airplanes used by the Western Air Express Company, recently organized here by a group headed by automotive men, will occupy a prominent part at the show.

"Interest in commercial aviation has developed to a point where we believe it should be catered to in an automotive transportation show," says Secretary Burt Roberts, of the Los Angeles Motor Car Dealers' Association.

The Los Angeles show, to be held in huge tents at Washington Park, will run from February 20 to 28. There will be 41 car distributors and dealers represented, and approximately 70 accessory and equipment exhibitors.

H. W. Tuttle, assistant general manager of the Howard Automobile Company of Los Angeles, Southern California Buick distributors, is chairman of the show committee. Associated with Tuttle are Reeve Gartzmann, Oakland distributor; Watt Moreland, president of the Moreland Motor Truck Company; Winslow Felix, Chevrolet dealer, and Ben Fahy, Ford dealer.

### Malone Has Own Business

BOSTON, Feb. 15.—Robert Malone, for the last seven years in charge of the used car departments of some of the larger distributors, has gone into business for himself, taking over the building at 720 Beacon street, vacated by the Exide Battery branch when it moved into its new building recently. Mr. Malone is going to specialize solely in used cars and he makes his first announcement next week.

### Lengthen Rubber Life

WASHINGTON, Feb. 15.—Rubber's durability with respect to the effects of light and heat can be increased about 600 per cent as the result of tests conducted here by the U. S. Bureau of Standards, it is announced. It has been known for some time that deterioration of vulcanized rubber by oxidation can be delayed by the use of substances which are themselves easily oxidized and which act as anticatalysis of oxidation, the Bureau's report states.

### Open Service Station

ROCHESTER, N. Y., Feb. 15.—Jack Blain and Charles Hergenroether, formerly connected with the Rochester Moon, Inc., have opened a Diana and Moon service station at 89 Franklin street.

They have purchased all parts and accessory stock of the former Moon agency, which recently went into bankruptcy, and are prepared to service on Moon and Diana cars. They will also engage in a general garage business, featuring repair work, storage and washing of cars.

### Sioux City Plans Show

SIOUX CITY, Ia., Feb. 15.—Sioux City's annual automobile show will be held March 3-6, inclusive, in the Auditorium. The 1926 show will be held under the auspices of the Sioux City Automobile Dealers' Association, a newly created division of the motor trades bureau of the Chamber of Commerce. At the organization meeting held recently, Clyde Cummins of the Cummins Motor Co. was named chairman of the new dealer group.

### Will Maintain Production

CHICAGO, Feb. 15.—Orders now on hand will force capacity production until June 1 by the Rickenbacker Motor Co., Detroit, according to H. A. Raseley, assistant sales manager. Mr. Raseley declared that capacity output is assured until that time in order to make shipments already contracted. This precludes all possibility of over-production by the plant and over-stocking by the Rickenbacker dealers, Mr. Raseley pointed out.

## Charlotte Dealers Hold Automobile Display Week

CHARLOTTE, N. C., Feb. 15.—The week of Feb. 8 was designated as automobile display week by the car dealers' division of the Charlotte Automotive Trade Association, which abandoned its plan to hold its annual show in a central building. Dealers of this city number 20 and represent 26 lines. The dealers are forecasting that the high public interest in the event will result in making it more successful, in many important respects, than any of the five annual shows.

Elaborate preparations were made by the individual dealers for this event. Heavy demands were made upon the musical and theatrical talent of this and neighboring cities. Some of the dealers, in arranging their entertainment programs, enlisted the assistance of singers and well-known instrumental soloists, while others engaged orchestras.

### New Home for Seattle Dealer

SEATTLE, Feb. 15.—Formal opening of the new home of Dunn Motors, Inc., at 501-9 East Pike Street took place recently. The present headquarters of this company is one of the finest in Seattle, being constructed solely as an automobile establishment and planned to take care of the automotive business. Dunn Motors Co., Inc., is Pike Street dealer for the Willys-Overland company. The new building is two stories in height and includes approximately 20,000 square feet of floor space.

## Automotive Construction Volume High in South

### Total Spent Places Industry Among Three Highest in Sixteen States

ATLANTA, Feb. 15.—A construction report just issued for the year 1925 by a well known financing concern in Atlanta shows the automobile industry to have ranked among the three leading industries of the south in the number of enterprises carried out during the year, and to have established a record estimated to be from 20 to 25 per cent larger than any previous year in the history of the business in the south.

While the figures contained in this report are doubtless as accurate as it is possible to make them, there are probably quite a few projects that were missed, particularly in smaller towns, hence the record made was really better than the figures would indicate. The total number of projects in the automotive field during 1925 in the 16 southern states was approximately 2,000, which includes only construction of an important nature either by companies already in existence or newly formed companies, and includes also the new companies formed in different branches of the automotive field during the year.

In construction alone the year's total would be about 500 projects in the South, including new sales buildings and service stations by motor car dealers and distributors, new buildings by dealers or jobbers in all other branches of the industry, and any important additions to existing buildings.

A conservative estimate of the money involved in this construction would place the figure at \$10,000,000 to \$12,000,000, though it would likely exceed this sum as there were several sales buildings and garages constructed, particularly in Atlanta, New Orleans, Memphis, Miami, Jacksonville, Tampa and Birmingham, which individually exceeded \$100,000 in cost, some of them as high as half a million dollars.

### Registrations Pick Up

AUSTIN, Texas, Feb. 15.—Automobile registration returns for the first month of 1926 far exceeded those for the corresponding month of last year, according to the State Highway Commission. Up to Feb. 1 a total of 359,214 passenger cars had been registered; 33,118 commercial cars; 1,372 buses; 1,164 trailers; 182 tractors; 24,752 transfers; 229 duplicates; 414 motorcycles; 1,066 dealers' licenses; 65 visitors' licenses; 2,082 chauffeurs' licenses.

The totals will go well over 1,000,000 in 1926, according to estimates at the Highway Commission. In many counties the local collectors gave motorists until February 1 to pay their annual fees, and this has retarded the receipts at the Highway Commission.



## 25,973,927 Motor Cars In World, Census Shows

**Increase for 1925 Over 1924 Is  
3,273,583 or 14 Per Cent,  
U. S. Bureau Says**

WASHINGTON, Feb. 15.—A world census of motor vehicles just concluded by the automotive division of the Department of Commerce and declared to be more nearly accurate than any which has gone before, shows that on January 1, 1926, there were 25,973,927 motor vehicles in world use. Of this number 20,799,151 were passenger cars, 181,573 motor buses, 3,454,939 trucks and 1,519,765 motor cycles. The total of these four classes of motor vehicles includes 18,500 motor vehicles in Russia of which separate figures as to classes are not available.

The increase for the year over the total reported on January 1, 1925, was 3,273,583—a gain of over 14 per cent. Of this total increase, the United States was responsible for 2,208,544 or almost 67 per cent.

Assuming the very conservative retail price of \$1,000 for cars, \$2,000 for trucks or buses, and \$300 for motor cycles, says the division, it appears that the world paid at least \$3,800,000,000 for new motor vehicles. It is to be remembered that this is only for the additional vehicles and that an undeterminable number of further units were sold to take the place, in the registration totals, of all the vehicles that went out of circulation during 1925.

The census shows that the United States is using about three and a half times as many automobiles as all the rest of the world combined. The United States has over 83 per cent of the passenger cars, 70 per cent of the trucks and buses and but 10 per cent of the motorcycles, or considering all classes, about 77 per cent of the world motor vehicle total.

During 1925 the total registration of motor vehicles in the United States increased about 12 per cent; this represents the addition of 1,811,722 passenger cars (about 12 per cent increase), 315,247 trucks and buses (about 15 per cent increase), and 11,575 motor cycles (about 9 per cent increase).

### Heads Traffic Bureau

LOS ANGELES, Feb. 15.—Harry A. Lord, president of the Lord Motor Car Company, Jordan distributors for Southern California, has been elected president of the Traffic Commission of the City and County of Los Angeles. This is the second time an automotive man has been chosen to head this important organization, Paul G. Hoffman, formerly Studebaker distributor here and now vice-president of the Studebaker Corporation of America at South Bend, having formerly served as the traffic commission chief in this territory. Don P.

Smith, Moon and Diana distributor, Los Angeles, was elected a member of the executive committee, and Robert Breyer, vice-president and general manager of the Troy Motor Sales Company, Nash and Ajax distributors; Earl Carpenter, vice-president, Paul G. Hoffman Co., Studebaker distributors; P. H. Greer, of Greer-Robbins Company, Chrysler and erts, secretary of the Los Angeles Motor Car Dealers Association, were elected members of the board of directors.

### Open Federal Branch

MILWAUKEE, Wis., Feb. 15.—Federal Motor Truck Co. of Detroit has opened a direct factory branch for the sale and service of Federal trucks in Milwaukee and vicinity, at 2440 North avenue. The new branch will maintain a complete stock of repair parts, a large mechanical staff and will offer adequate service to Federal owners in the Milwaukee district.

## Given Milwaukee County Fordson Sales Franchise

MILWAUKEE, Wis., Feb. 15.—Organization of the Milwaukee Power Equipment Co. to handle all of the Fordson and allied equipment sales in Milwaukee county has been effected here by Arthur E. Raab, of the Raab Motor Co., Louis A. Snetcamp of the Northwestern Motor Co. and Walter Soerens of the Kilbourn Motor Co., all prominent Ford dealers. Capital of the new company is \$60,000.

The purpose of the Milwaukee Power Equipment Co. is to take over the sale of all Fordsons in the county. Previously power equipment of this kind had been sold through Ford dealers, with each dealer handling one or more pieces of this equipment in connection with Ford sales. The new plan will centralize the sale of the Ford power equipment, and allied products, in an organization and should result in increased sales in this territory.

## Demand for New Cars Is Stimulated in Carolina

**Spring Rush Beginning to Be  
Felt—Used Automobiles  
Selling Slowly**

CHARLOTTE, N. C., Feb. 15.—The intermittent return of Spring-like weather is serving to stimulate the demand for automobiles in the Carolina territory and the leading distributors here indicated that the preliminary skirmishes of perhaps the greatest battle in the history of the retail automobile trade in this territory are now being fought.

The situation is somewhat complex, but the outstanding feature is the existing severe competition, with the prospect presented of even more vigorous competitive effort as the spring season advances. The retail dealers here generally report sales of new cars so far this year equal to or greater than the volume for the same period of last year. The probably temporary disturbance in the tire market, incident to the reduction of prices, is not expected to materially influence new car sales, it was understood.

Used cars continue to constitute an aggravating problem for the dealers in this territory, and in Charlotte the used car market is under heavy pressure. Prices are being sharply reduced by retailers, though it is not confirmed in all instances that the offers to owners in prospective trades are being proportionately reduced.

The Ford Motor Company's branch here is anticipating an increase of 25 per cent this year in the sales of Lincoln cars in the Carolina territory, it was understood. Business in this line so far this year has been good, it was reported.

## Whipple's Holds Annual Blowout



More than 1100 dealers attended the Fifth Annual Convention and Blowout of Whipple's automotive jobbers, at Binghamton, N. Y. This photograph shows the guests at dinner.

# TRADE ASSOCIATION ACTIVITIES

## SOUTHERN JOBBERS CHANGE DATE

Meeting of Association Will Be Held Late in March

ATLANTA, Feb. 15.—The annual convention of the Southern Automotive Jobbers' Association is to be held in Atlanta during the latter part of March, probably somewhere around the twentieth of the month, instead of Wednesday, Thursday and Friday of next week, Feb. 17 to 20, as had been originally planned, according to members of the association with the Atlanta jobbing houses.

Thomas Glasgow, of Charlotte, N. C., president of the association, will preside at the forthcoming meeting, and though definite announcement of the location has not yet been made, it will probably be held at the Biltmore Hotel.

The convention will bring together this year a majority of the leading jobbers in the southeastern territory, or representatives of their firms, together with salesmen and others representing manufacturers of accessories, replacement parts, etc., in the northern and middle western territory.

An excellent program is being arranged by the executive committee, which will include talks by well-known southern jobbers on wholesale merchandising, by credit men on collections and credit work, and by representatives of manufacturing firms in both parts and accessories on the productive end of the business. Merchandising, however, will comprise the keynote of the annual meeting.

## Des Moines Dealers Elect

DES MOINES Ia., Feb. 15.—The entire personnel of the Des Moines Automobile Dealers' Association was re-elected at the annual meeting at the Des Moines Club.

Dean Schooler of the Schooler-Oakland Auto Co. was re-named president; W. W. Sears of the Sears Automobile Co., vice-president; C. G. Van Vliet, secretary, and J. A. Peverill of the Hudson-Jones Motor Co., treasurer. J. A. Peverill and C. L. Herring, Herring Motor Co., were placed on the board of directors for a two-year period. C. G. Van Vliet was elected to a one-year term on the board.

## St. Louis Service Men Elect

ST. LOUIS, Feb. 15.—By-laws of the battery division of the Associated Automobile Service Companies of St. Louis were changed at the annual meeting of that organization permitting manufacturers of storage batteries to hold office. When the division was organized a year ago it was feared that the manufacturers would exercise too large an influence in the organization, hence they were excluded from holding office. However, it has been learned by experience that a great deal of advantage resulted to the division from co-operation of manufacturers.

Thomas C. Byrne was re-elected president of the battery division; Oscar G. Mullines, vice-president; Clemense C. Friedrich, treasurer; Robert E. Cummings, secretary; Fred L. Maevers, sergeant-at-arms, and James M. Downey was appointed representative of the division on the board of directors of the A. A. S. Co. of St. Louis.

The Pyramid Battery & Mfg. Co., 1503 Chestnut street; Easton-Taylor Battery & Electric Co., 4527 Easton avenue; F. & F. Tire & Battery Store, 1825 North Grand boulevard; Paul D. Lindsey, Lindsey & Son, 2617 Pestalozzi street, and D. Feldman, 1253 North Garrison avenue, were admitted to membership.

## N. S. P. A. Plans Account System

DETROIT, Feb. 15.—A standardized system of accounting, bookkeeping and stock keeping has been undertaken by the National Standard Parts Association as a result of its January meeting, it was announced here. A definite plan of group organization among the replacement dealers throughout the country whether National Standard Parts Association members or not and the active co-operation of N. S. P. A. officers in organizing such groups has been formulated but will not be announced until a later date. C. B. Fraser, secretary, resigned and was succeeded by Robert McFee as assistant manager. George Kreplin, president of the Triangle Parts Company of San Francisco, was appointed director to fill the unexpired term of W. D. Patterson of the Patterson Parts, Inc., San Francisco, who has severed his connections and is now engaged in business in Chicago.

## GARAGE MEN WANT ENFORCEMENT

Kansas City Parking Laws Must Be Observed, Says Trade

KANSAS CITY, Feb. 15.—At a conference of Kansas City garage owners steps were taken to secure the enforcement of the state and city laws concerning parking on the downtown streets and leaving a car on the streets all night without lights.

The garage men figure that they are apt to get more business out of the many who would occupy the space if the law were enforced than out of the few who parked for the day.

It was reported at the conference that some of the faithful officers who had been active in enforcing the parking law had been removed from the beat and in one or more cases, demoted, because of complaints lodged by certain merchants who thought their business had suffered because of the enforcement of the law. It was decided to investigate, and back up the officer in doing his duty.

It is proposed to have an ordinance passed to remove all gas pumps from the sidewalks of the city. This would be to the detriment of most of the smaller garages, and the movement will be strenuously opposed by the Kansas City Auto Trades Association, to which most of the leading garage men belong. The garage men believe that the movement is being pushed by the owners of the gasoline stations at the corners of the streets.

## Sees Passing of Street Cars

MILWAUKEE, Feb. 15.—Arthur W. S. Herrington, chief of the motor transportation division, Q. M. C., United States army was the chief speaker at the regular meeting of the Milwaukee Society of Automotive Engineers. Slow moving street cars must give way to faster passenger buses and street cars will become obsolete within the next few years, as far as downtown traffic is concerned, Mr. Herrington asserted. One-way traffic is but a temporary solution of the traffic problem, which he designated as one of the most baffling now before the automobile industry. Segregation of pedestrian traffic was a partial remedy advocated by the speaker.

## Radio Association Formed

ROCHESTER, N. Y., Feb. 15.—The Rochester Radio Association has been organized by radio and accessory dealers here to promote the welfare of the dealers and radio owners. Thomas B. Sharar, of Chapin-Owen Company, Inc., one of the largest automotive accessory houses in the city, is president of the new association. Other automotive men active in the association are Ray M. Smith, of Thomas J. Northway, Inc., Reo distributor, secretary. On the board of directors is J. Lawrence Hill, of J. Lawrence Hill Company, Inc., garage and accessory dealer; Charles L. Hohman, Starter and Ignition Service Company, Inc.; Henry J. Rowerdink, of W. H. Rowerdink and Son, Inc. One of the objects of the association, according to President Sharar, is to protect legitimate dealers from illegitimate selling sources.

## New Officers of Michigan Automotive Trade Association



Left to right, George L. Simmons, president; L. H. Saunders, treasurer; Frank E. Hathway, vice president; W. D. Edenburn, manager, and H. H. Shuart, secretary.



## Traffic Authority Says Cars Must Fit Streets

### Believes Inability of Cities to Keep Pace Will Result In Changed Models

LOS ANGELES, Feb. 15.—That automobiles of improved design permitting two cars to operate where but one operated before, and legislation to bar from the streets those motor vehicles that require excessive space or retard the flow of traffic, may be the ultimate solution of the traffic problem is the opinion of Clarence R. Snethen, of the Los Angeles Traffic Commission, contained in a report prepared after a comprehensive survey. Mr. Snethen, who has been studying traffic conditions in the leading cities throughout the United States, says that traffic regulations, increased parking facilities, widened streets and additional thoroughfares have their limits for cities will soon reach the maximum of economic expansion.

"When the cities cannot adapt themselves to the continued increase of automobiles," Mr. Snethen asserts, "the car manufacturers will have to adapt automobiles to conditions in the cities. Thus the automobile manufacturer is already beginning to realize that he is face to face with the great problem of preventing cities from reaching a point at which they can no longer absorb additional cars."

"In short, the manufacturers must solve the problem of making two automobiles operate where but one operated before. Since the space for cars cannot be increased rapidly enough, the new type car must be built to require less space when traveling the highways."

"Laws to bar the car or truck that prevents others from maintaining an efficient speed are surely just as logical and just as necessary as those that curb overspeeding. When the time comes that all motor vehicles can move in unison at a constant speed, can halt in a minimum space, and attain the legal speed in the minimum time, the traffic problems will have been carried a long way toward solution."

### Willys to Retire Preferred

TOLEDO, Feb. 15.—Directors of the Willys-Overland company, in authorizing President John N. Willys to purchase and retire \$3,727,560 of preferred stock, have brought retirements up to date and put everything in shape for early resumption of a dividend on the common stock. The retirement authorized will leave only \$18,321,940 of preferred outstanding.

### Plane Plant Being Rebuilt

DETROIT, Feb. 15.—Reconstruction work is well under way at the Ford Airport, Dearborn, following a destructive fire when the factory of the Stout Metal Airplane Co. division of the Ford Motor

Co. as well as four metal airplanes were destroyed. A considerable portion of the structural steel for the new plant is already erected and the completed building will be ready for occupancy in a few weeks. The new factory will be very much larger than the one destroyed and will embody several new features to facilitate the erection and handling of the planes.

### Zapinski Goes to Chicago

CHICAGO, Feb. 15.—S. J. Zapinski, auditor for the Yellow Sleeve Valve Engine Works, East Moline, Ill., has been advanced to auditor of the Yellow Truck & Coach Manufacturing Company in Chicago. He has been in East Moline three years and will be succeeded there by E. E. Peterson of Chicago. Mr. Zapinski has been with various units of the General Motors Corporation since 1915.

### Asks Apperson Service

KOKOMO, Ind., Feb. 15.—Affairs of the defunct Apperson Automobile Co. and the Pioneer Automobile Co., holding company for Apperson real estate and plants here, have been further complicated by the filing of a suit by Robert L. Tudor, receiver for both firms, in which he asks that the claims of the General Parts Corporation, Flint, Mich., on the Apperson service department be declared null and void and that he be permitted to operate the service department. The complaint states that in December, 1925, shortly before the Apperson Automobile Co. was declared bankrupt, officers of the concern contracted for the sale of the service department to the General Parts Corporation. Tudor charges that the sale was made without the knowledge or consent of directors or stockholders.

## Detroit Revenue Gains Heavily in Fiscal Year

### \$51,745,837 Is Yield of First Seven Months Compared to \$7,690,740 in All 1925

DETROIT, Feb. 15.—Prosperity never attained before by the automobile industry in the Detroit area for the first seven months of the fiscal year of 1926, was indicated by Fred L. Woodworth, collector of internal revenue in figures which he has compiled.

From July 1, until February 1, the first seven months of the present fiscal year, excise taxes collected on automobile sales here totaled \$51,745,837.15. This tax for the entire twelve months of 1925 was \$7,690,740.19.

The excise taxes, which levy 3 per cent on the sales price of trucks and 5 per cent on pleasure cars, show an average gain of approximately \$1,500,000 a month over the 12 months of 1925, despite the fact the months from July to January are rated the duller from the sales standpoint in the automotive industries.

The average monthly tax collected for the first seven months of the present fiscal year totaled \$7,392,262.

### Philadelphia Attendance 84,000

PHILADELPHIA, Feb. 15.—The final tally of the attendance figures for the Twenty-fifth Annual Automobile Show discloses that they reached approximately 84,000 paid admissions, the largest on record.

## Coming Motor Events

### Automobile Shows

Hartford, Conn.	Feb. 20-27
Grand Rapids, Mich.	Feb. 22-27
Omaha	Feb. 22-27
St. Louis	Feb. 22-27
Mankato, Minn.	Feb. 23-27
Johnstown, Pa.	Feb. 27-Mar. 6
Allentown, Pa.	Feb. 27-Mar. 6
Wilmington, Del.	Mar. 1-4
Evansville, Ind.	Mar. 1-6
Springfield, Mass.	Mar. 1-6
Sioux City, Ia.	Mar. 3-6
Boston	Mar. 6-12
Ft. Worth, Tex.	Mar. 6-14
Bethlehem, Pa.	Mar. 7-13
Saginaw, Mich.	Mar. 10-13
Detroit	Mar. 29-Apr. 3

(Second annual Motor Bus Show)

### Conventions

Illinois Automotive Trade Association,	
sixth annual, Abraham Lincoln Hotel,	
Springfield, Ill.,	March 1-2.

### COMING FEATURES OF CHILTON

May 6—Motor AGE—Sales and Service Reference Number.

North Carolina Automotive Trade Association, annual, Winston-Salem, N. C., March 17.

Texas Automotive Dealers' Association, Tenth annual, Galvez Hotel, Galveston, Tex., May 12-13.

### Races

Miami, Florida	Feb. 22, 1926
Los Angeles, Cal.	Mar. 21, 1926
Fresno, Cal.	April 15, 1926
Atlantic City, N. J.	May 1, 1926
Charlotte, N. C.	May 10, 1926
Indianapolis, Ind.	May 31, 1926
Altoona, Pennsylvania	June 12, 1926
Laurel, Maryland	June 26, 1926
Salem, New Hampshire	July 5, 1926
Atlantic City, N. J.	July 17, 1926
Altoona, Pennsylvania	Sept. 6, 1926
Salem, New Hampshire	Sept. 25, 1926
Laurel, Maryland	Oct. 9, 1926
Atlantic City, N. J.	Oct. 23, 1926
Charlotte, N. C.	Nov. 11, 1926
Los Angeles, Cal.	Nov. 25, 1926

### CLASS JOURNAL PUBLICATIONS

May—Automobile Trade Journal—Small Town Market Issue.

# Prices and Weights of Current Passenger Car Models

SHIP.  
WT. PASS. BODY STYLE. PRICE

**AJAX**

108 in. W. B.

2210 5-p Touring \$865

2410 5-p Sedan 995

**APPERSON "6"**

3100 5-p Phaeton \$1,575

3130 5-p Sp. Phaeton 1,650

3145 4-p Coupe 2,050

3570 5-p Sp. Sedan 2,100

**"ST. 8"**

3520 5-p Sp. Phaeton 1,995

3750 4-p Coupe 2,450

3790 5-p Sedan 2,595

**AUBURN**

5-p Touring \$1,145

5-p Roadster 1,145

5-p Coupe 1,175

5-p Sedan 1,195

**"6-66"**

2850 4-p Sport-Roadster 1,395

2860 6-p Touring 1,395

3020 3-p Coupe 1,445

3070 5-p Brougham 1,495

3070 5-p Sedan 1,695

3070 5-p Wanderer 1,745

**"8-88"**

3180 4-p Sport-Roadster 1,695

3200 6-p Touring 1,695

3200 3-p Coupe 1,745

3380 5-p Brougham 1,795

3450 5-p Sedan 1,995

3450 5-p Wanderer 2,045

3750 7-p Sedan 2,095

**BUICK "Standard"**

2845 2-p Roadster \$1,125

2955 5-p Touring 1,150

3020 2-p Coupe 1,195

3150 5-p 2 d. Sedan 1,195

3110 4-p Coupe 1,275

3230 5-p 4 d. Sedan 1,295

**"Master"**

120 in. W. B.

3350 2-p Roadster 1,250

3515 5-p Touring 1,295

3670 5-p 2 d. Sedan 1,395

3765 5-p Sedan 1,495

**"128 in. W. B."**

3570 4-p Sp. Roadster 1,495

3635 5-p Sp. Touring 1,525

3805 4-p Country Club 1,765

3855 4-p Coupe 1,795

3940 4-p Brough. Sedan 1,925

4025 7-p Sedan 1,995

**CADILLAC**

**"314" Standard Line**

132 in. W. B.

4040 2-p Coupe \$3,045

4210 5-p Sedan 3,195

4315 7-p Sedan 3,295

4110 5-p Brougham 2,995

4380 7-p Imperial 3,435

4115 4-p Victoria 3,095

**Custom Built**

132 in.

4065 3-p Roadster 3,250

**"138 in. W. B."**

4125 7-p Touring 3,250

4100 5-p Phaeton 3,250

4300 5-p Coupe 4,000

4300 5-p Sedan 4,150

4400 7-p Suburban 4,285

4450 7-p Imperial 4,485

**CASE**

**J. I. C.**

3260 3-p Roadster \$1,840

3290 5-p Touring 1,885

3470 5-p Sp. Touring 2,160

3640 5-p Sedan 2,590

3650 5-p Brougham 2,590

**"Y"**

3950 7-p Touring 2,225

4320 7-p Sedan 2,975

**CHANDLER "35"**

3090 2-p Roadster \$1,695

3085 5-p Sport Touring 1,545

3233 7-p Touring 1,645

3309 5-p Brougham 1,695

3525 5-p Met. Sedan 1,895

3498 5-p 20th C'y Sedan 1,590

3594 7-p Sedan 1,995

**CHEVROLET**

**"Superior" (Series K)**

1780 2-p Roadster \$510

1875 5-p Touring 510

2030 2-p Utility Coupe 645

2130 5-p Coach 645

2215 5-p Sedan 735

2215 5-p Landau Sedan 765

**CHRYSLER "FOUR"**

109 in. W. B.

2300 2-p Roadster \$890

2300 2-p Touring 845

2405 2-p Club Coupe 895

2510 2-p Coach 935

2570 5-p Std. Sedan 995

SHIP.  
WT. PASS. BODY STYLE. PRICE

**CHRYSLER (Continued)**

**"Six" (112 3/4 in. W. B.)**

2805 4-p Roadster \$1,625

2785 5-p Phaeton 1,395

2895 5-p Coach 1,445

2935 4-p Coupe 1,795

2995 5-p Brougham 1,865

3060 5-p Sedan 1,695

3085 5-p Imperial Sedan 1,995

3090 5-p Crown Sedan 2,095

**Imperial**

120 in. W. B.

4-p Roadster 2,885

5-p Phaeton 2,645

5-p Sedan 3,395

**"127 in. W. B."**

4-p Coupe 3,195

7-p Sedan 3,595

7-p Sedan Lim. 3,695

**CLEVELAND "31"**

2415 5-p Touring \$945

2565 5-p Tour'g DeLuxe 1,025

2520 3-p Coupe 1,035

2695 5-p Sedan 1,090

**"43"**

2800 5-p Touring 1,145

2915 3-p Coupe 1,225

2975 5-p Sp. Touring 1,295

3145 5-p Sedan 1,345

3215 5-p Sedan DeLuxe 1,595

3215 5-p Sport Sedan 1,625

**CUNNINGHAM**

**"V-6"**

4600 7-p Touring \$6,650

4500 4-p Sp. Touring 6,150

4700 4-p Coupe 7,600

5000 6-p Limousine 8,100

**DAGMAR**

**"6-70"**

3750 4-p Roadster \$3,500

3800 4-p Sp. Tourer 3,500

3700 4-p Phaeton 3,500

4200 4-p Petite Coupe 4,500

4200 5-p Petite Sedan 2,540

4500 4-p De Luxe Coupe 4,750

4700 5-p Sedan 4,700

4800 7-p Sedan 4,750

**"6-60"**

3100 2-p Roadster 1,985

3200 4-p Sp. Touring 1,985

3150 5-p Touring 1,785

3500 5-p Sedan 2,445

**DAVIS**

**"92"**

2660 4-p Roadster \$1,495

2915 5-p Legion. Tour. 1,495

3000 5-p Sedan 1,395

3060 5-p Imperial Sedan 1,795

**"93"**

5-p Touring \$1,285

2635 5-p Sedan 1,285

2600 3-p Coupe 1,285

**DIANA "St. 8"**

2995 5-p Roadster \$1,695

3100 5-p Phaeton 1,695

3275 5-p De Luxe Sedan 1,995

3160 5-p Cabriolet 1,995

3170 5-p Sedan De Luxe 2,095

3640 7-p Sedan (135 in. W. B.) 2,695

**DODGE BROTHERS**

2473 2-p Roadster \$ 795

2593 2-p Special Roadster 845

2567 5-p Touring 795

2695 5-p Spec. Touring 845

2708 2-p Coupe "B" 845

2823 2-p Spec. Coupe "B" 895

2995 5-p "B" Sedan 895

3077 5-p Spec. "B" Sed. 945

3107 5-p Spec. "A" Sed. 1,075

**DUESENBERG**

**Straight "8"**

3920 2-p Roadster ↑

3970 4-p Roadster ↑

3700 5-p Phaeton \$6,650

3980 4-p Sp. Phaeton ↑

4115 5-p Sedan ↑

4500 7-p Sedan ↑

↑Manufacturers do not quote list prices.

**DU PONT**

**"D"**

3300 2-p Roadster \$2,600

3550 5-p Touring 2,600

3800 7-p Touring 2,750

3550 5-p Touring Sedan 3,400

**DURANT**

**A-22**

2300 5-p Touring \$ 730

2380 5-p Spec. Touring 805

2450 4-p Coupe 825

2480 4-p Spec. Coupe 875

2650 5-p Sedan 880

2710 5-p Spec. Sedan 995

SHIP.  
WT. PASS. BODY STYLE. PRICE

**ELCAR**

**"4-55"**

2560 5-p Touring \$1,095

2785 4-p Roadster 1,295

2900 5-p Coach 1,195

2779 3-p Coupe 1,295

2779 5-p Sedan 1,395

**"6-65"**

5-p Touring 1,295

4-p Roadster 1,495

5-p Coach 1,395

3-p Coupe 1,495

2900 5-p Sedan 1,595

**"8-81"**

4-p Roadster 2,315

7-p Touring 2,265

3000 3-p Coupe Road. 2,195

4-p Coupe 2,095

5-p Sedan 2,265

4050 7-p Sedan 2,765

**ESSEX**

2185 5-p Touring \$765

2395 5-p Coach 765

**FLINT**

**"80"**

3325 4-p Sport Road. \$1,945

3245 5-p Touring 1,595

3310 4-p Sp. Touring 1,945

3245 4-p Coupe 2,045

3595 5-p Sedan 2,195

7-p Sedan 2,395

**"60"**

4-p Roadster 1,395

2715 5-p Touring 1,285

4-p Coupe Roadster 1,495

2940 5-p Sedan 4d. 1,525



# Prices and Weights of Current Passenger Car Models

SHIP.  
WT. PASS. BODY STYLE. PRICE

McFARLAN "6" (Continued)				
3850	4-p	Coupe	3,180	
3850	5-p	Sedan	3,180	
3850	5-p	Spec. Sedan	3,180	
3850	7-p	Sedan	3,280	
3850	7-p	Sub. Sedan	3,480	
3850	7-p	Sub. Sedan	3,480	
3850	5-p	Brougham 4d.	3,180	

"TV"				
4000	2-p	Roadster	5,400	
4600	4-p	Sp. Touring	5,600	
4900	4-p	Coupe	6,720	
5200	4-p	Tour. Sedan	6,720	
5200	7-p	Tour. Sedan	6,810	
5200	6-p	Sedan	6,720	
5200	7-p	Sedan	6,810	
5200	7-p	Spec. Sedan	6,810	
5200	7-p	Enc. Sedan	7,110	
5200	7-p	Sub. Sedan	7,110	
5200	7-p	Town Car	9,000	

"Straight 8"				
2-p	Roadster	2,650		
4-p	Roadster	2,900		
5-p	Touring	2,650		
5-p	Touring	2,750		
5-p	Sedan	3,180		
5-p	Sub. Sedan	3,380		
5-p	Sedan	3,280		
5-p	Sub. Sedan	3,480		
4-p	Coupe	3,180		
5-p	Coach Broug.	3,180		
5-p	Town Car	4,600		

MARMON "74"				
3695	2-p	Roadster	\$3,295	
3604	5-p	Phaeton	3,295	
3704	7-p	Touring	3,295	
3799	5-p	Broug. Coupe	3,295	
3754	4-p	Victoria Coupe	3,295	
3616	2-p	Std. Coupe	3,295	
3869	5-p	Sedan	3,295	
3859	5-p	Sedan De Luxe	3,775	
3999	7-p	Sedan	3,370	
3974	7-p	Sedan De Luxe	3,850	
3969	5-p	Sedan Lim.	3,900	
3999	7-p	Sedan Lim.	3,975	

MOON Series "A"				
2600	5-p	Roadster	\$1,395	
2720	5-p	Cab. Roadster	1,545	
2560	5-p	Touring	1,195	
2710	5-p	Coach	1,295	
2710	5-p	DeL. Sedan 2d.	1,495	
2850	5-p	Std. Sedan 4d.	1,445	
2860	5-p	DeL. Sedan 4d.	1,595	
London				
3270	5-p	Sp. Touring	1,985	
3290	7-p	Touring	1,985	
3590	5-p	Petite Sedan	2,540	

NASH "Special"				
2870	2-p	Roadster	\$1,115	
2980	5-p	Touring	1,135	
3030	2-p	Business Coupe	1,165	
3120	5-p	Sedan 2d.	1,215	
3120	5-p	Sedan	1,315	
3300	5-p	Sedan 4d.	1,445	

"Advanced" (121 in. W. B.)				
3320	3-p	Roadster	1,375	
3400	5-p	Touring	1,340	
3550	5-p	Sedan 2 d.	1,425	

"Advanced" (127 in. W. B.)				
3480	7-p	Touring	1,490	
3640	4-p	Victoria	1,790	
3750	5-p	Coupe 4 d.	1,990	
3830	7-p	Sedan	2,090	

OAKLAND "6"				
2425	2-p	Roadster	\$975	
2500	5-p	Touring	1,025	
2600	4-p	Sp. Roadster	1,175	
2640	5-p	Coach	1,095	
2615	3-p	Landau Coupe	1,125	
2765	5-p	Sedan	1,195	
2885	5-p	Landau Sedan	1,295	

OLDSMOBILE "30"				
2235	5-p	Touring	\$875	
2445	4-p	DeL. Roadster	975	
2445	5-p	Sp. Touring	980	
2460	2-p	Coupe	925	
2460	5-p	Coach	950	
2460	2-p	De Luxe Coupe	990	
2660	5-p	De Luxe Coach	1,040	
2535	5-p	Sedan	1,025	
2735	5-p	De Luxe Sedan	1,115	

OVERLAND "91" 4 (100 in. W. B.)				
1919	5-p	Touring	\$495	

SHIP.  
WT. PASS. BODY STYLE. PRICE

OVERLAND (Continued)				
2205	5-p	Sedan De Luxe	695	
2202	5-p	Std. Sedan 2 d.	595	
"93" 6 (112 1/4 in. W. B.)				
2443	5-p	Touring	895	
2443	5-p	Std. Sedan	895	
2584	5-p	Sedan De Luxe	1,095	

PACKARD "6" (126 in. W. B.)				
3643	4-p	Roadster	\$2,785	
3653	5-p	Touring	2,585	
3595	4-p	Sp. Touring	2,750	
3753	4-p	Coupe	2,585	
3937	5-p	Sedan	2,585	

(133 in. W. B.)				
3793	7-p	Touring	2,785	
4043	7-p	Sedan	2,785	
4133	5-p	Club Sedan	2,725	
4133	7-p	Sedan Lim.	2,885	

"8" (136 in. W. B.)				
4060	4-p	Runabout	3,950	
4090	5-p	Touring	3,750	
4023	4-p	Sp. Touring	3,900	
4242	4-p	Coupe	4,650	
4528	5-p	Sedan	4,750	
4528	2-p	Coupe	5,775	

(143 in. W. B.)				
4199	7-p	Touring	3,950	
4655	5-p	Club Sedan	4,890	
4655	7-p	Sedan	5,000	
4710	7-p	Sedan Lim.	5,100	

PAIGE "24-26"				
5-p	Std. Sedan	1,495		
5-p	Sedan De Luxe	1,670		
4-p	Cab Roadster	2,295		
7-p	Sedan	1,995		
7-p	Limousine	2,245		

PEERLESS "6-72" (126 in. W. B.)				
3175	5-p	Touring	\$1,895	
3425	5-p	Coupe	2,295	
3500	5-p	Sedan	2,395	

(133 in. W. B.)				
3275	2-p	Sp. Roadster	2,195	
3300	7-p	Touring	1,995	
3700	7-p	Sedan	2,595	
3825	7-p	Limousine	2,695	

"6-80" (116 in. W. B.)				
2950	5-p	Sedan	\$1,495	
3140	5-p	Std. Sedan	1,595	

"8-69" (133 1/2 in. W. B.)				
5-p	Roadster	\$2,995		
5-p	Sedan	3,495		
7-p	Sedan	3,595		
7-p	Berl. Limousine			

PIERCE-ARROW "33"				
4350	2-p	Runabout	\$5,250	
4500	4-p	Touring	5,250	
4590	7-p	Touring	5,250	
4730	3-p	Coupe	6,800	
4800	4-p	Sedan	6,900	
4960	7-p	Sedan	7,000	
4750	4-p	Coupe Sedan	6,900	
4730	6-p	Brougham	6,800	
4850	7-p	Limousine	7,000	
5060	7-p	Enclosed Lim.	7,000	
4780	7-p	French Lim.	7,000	
4730	6-p	Landaulet	7,000	

"80"				
3205	2-p	Roadster	2,895	
3260	4-p	Phaeton	3,095	
3385	7-p	Phaeton	2,895	
3430	5-p	Coach	3,150	
3365	4-p	Coupe Landau	3,820	
3335	4-p	Coupe	3,695	
3440	5-p	Sedan	3,895	
3560	7-p	Sedan	3,995	
3615	7-p	Enc. Dr. Lim.	4,045	

PONTIAC (110 in. W. B.)				
2270	2-p	Coupe	\$ 825	
2235	5-p	Coach	825	

REO "T-6"				
3350	2-p	Roadster	\$1,665	
3182	5-p	Sp. Touring	1,395	
3350	2-p	Coupe	1,495	
3350	3-p	Spec. Coupe	1,565	
3515	5-p	Sedan 4 d.	1,565	
3515	5-p	Spec. Sedan	1,745	

REVERE "25"				
3900	2-p	Sp. Roadster	\$2,750	
3975	4-p	Speedster	2,750	
4060	5-p	Touring	2,750	
4300	5-p	Sedan	3,800	

SHIP.  
WT. PASS. BODY STYLE. PRICE

REVERE (Continued)				
3700	2-p	Roadster	3,200	
3800	4-p	Sportster	3,200	
3970	5-p	Touring	3,200	
4400	5-p	Sedan	4,000	

RICKENBACKER "E" (117 in. W. B.)				
5-p	Touring	\$1,750		
7-p	Touring	1,795		
3116	5-p	Coupe-Sedan	1,695	
3202	5-p	Brougham	1,895	
4-p	Coupe Roadster	1,920		
3040	4-p	Coupe DeLuxe	1,995	
3317	5-p	Sedan	2,095	
7-p	Sedan	2,195		

"B-8" (121 1/2 in. W. B.)				
4-p	Roadster	2,195		
5-p	Touring	2,150		
7-p	Touring	2,195		
4-p	Sup. Sp. Roadster	3,250		
5-p	Coupe Sedan	2,095		
3486	5-p	Brougham	2,295	
4-p	Coupe Roadster	2,320		
3440	4-p	Coupe DeLuxe	2,395	
5-p	Sedan	2,495		
7-p	Sedan	2,595		
4-p	Sup. Sp. Sedan	5,000		

ROAMER "6-50-55" (115 in. W. B.)				
5-p	Spec. Tourer	1,295		
5-p	Spec. Sp. Tourer	1,395		
2-p	Bus. Coupe	1,395		
5-p	Coupe	1,395		
5-p	Sedan DeLuxe	1,695		

"6-54-E" (118-138 in. W. B.)				
4-p	Roadster	2,385		
4-p	Tourer	1,985		
4-p	Sport	2,285		
7-p	Tourer	2,285		
5-p	Cabriolet	2,750		
5-p	Sedan	2,950		

"4-75-E" (128 in. W. B.)				
2-p	Speedster	3,485		
3-p	Sport	3,285		
4-p	Tourer	2,985		

"8-88" (138 in. W. B.)				
4-p	Roadster	2,750		
5-p	Sport	2,750		
5-p	Tourer	2,495		
7-p	Tourer	2,585		
2-p	Speedster	2,985		
5-p	Sedan	1,995		
3-p	Cabriolet	2,950		
5-p	Spec. Sedan	3,485		
7-p	Sedan (136-in. W. B.)	3,285		
5-p	Brougham	2,895		

ROLLS-ROYCE				
Chassis				

STANLEY "269"
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# Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	(Wheel Base)	Tire Size	Decimals-Balloons	Make and Model	Bore and Stroke	Rated H.P.	Piston Displacement	Valve Arrangement	Camshaft Drive	Crankcase In-let or Sep.	Piston Material	No. Main Bear.	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Carburetor	Air Cleaner?	ELECTRICAL SYSTEM				Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	REAR AXLE		BRAKES		Steering Gear—Make	Rear Springs—Type and Location	Chassis Lubrication—Type and Make	ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS
																			Ignition System	Generator and Starter Make	Gear Ratio	Type and Make				Foot—Type and Location	Hand—Type and Location	4-Wheel Type	= Optional				
Ajz...	108	30x4.75	30x4.75	Own...	6-3x4	21.6	170	I	He.	Int.	CI	7	P	N	Pu.	N	Car.	N	N	A-L.	P B&B.	Own.	f-Thr.	1/2	4.77	E-T	Ross.	5-50 1/2	Pr-Al.	A-K—Atwater-Kent			
Apperson...	120	33x6.00	33x6.00	Own...	6-3x4 1/4	24.4	204	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P Roc.	Mec.	m-Spl.	1/2	5.10	B-F	Ross.	J-48	Pr-Ze.	A-L—Auto-Lite			
Apperson... St. Away 8	130	33x6.00	33x6.00	Own...	6-3x4 1/4	31.3	276	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P Roc.	Mec.	m-Spl.	1/2	5.10	B-F	Ross.	J-48	Pr-Ze.	Ad—Adams			
Auburn...	120	30x5.25	30x5.25	Own...	6-3x4 1/4	25.3	208	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	Al—Alameda			
Auburn... 4-44	121	30x5.25	30x5.25	Own...	6-3x4 1/4	25.3	208	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	B&B—Borg & Beck			
Auburn... 6-66	121	30x5.25	30x5.25	Own...	6-3x4 1/4	25.3	208	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	B&B—Borg & Beck			
Auburn... 8-88	121	30x5.25	30x5.25	Own...	6-3x4 1/4	25.3	208	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	B&B—Borg & Beck			
Auburn... Standard	114 1/2	33x6.00	33x6.00	Own...	6-3x4 1/4	25.3	208	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	Bu—Buick			
Buick...	120-128	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	Bu—Buick			
Buick... Master	132-138	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	Bu—Buick			
Buick... 314	132-138	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	Bu—Buick			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... Case	JIC	122	33x6.00	Con...	8R 6-3x4 1/4	27.3	242	L	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
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Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—Carter			
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Buick... 314	132	33x6.00	33x6.00	Own...	6-3x4 1/4	31.2	274	I	He.	Int.	CI	4	P	N	Pu.	N	Str.	N	N	Remy	P B&B.	W-G.	m-Mec.	1/2	5.10	B-F	Ross.	S-57	Pr-Ze.	C—C—			





# Molybdenum Steel Balls

are now used in

## Super-Strom Ball Bearings

—available in all important sizes

# Strom

## BALL BEARINGS

MARLIN-ROCKWELL CORPORATION

Successor to

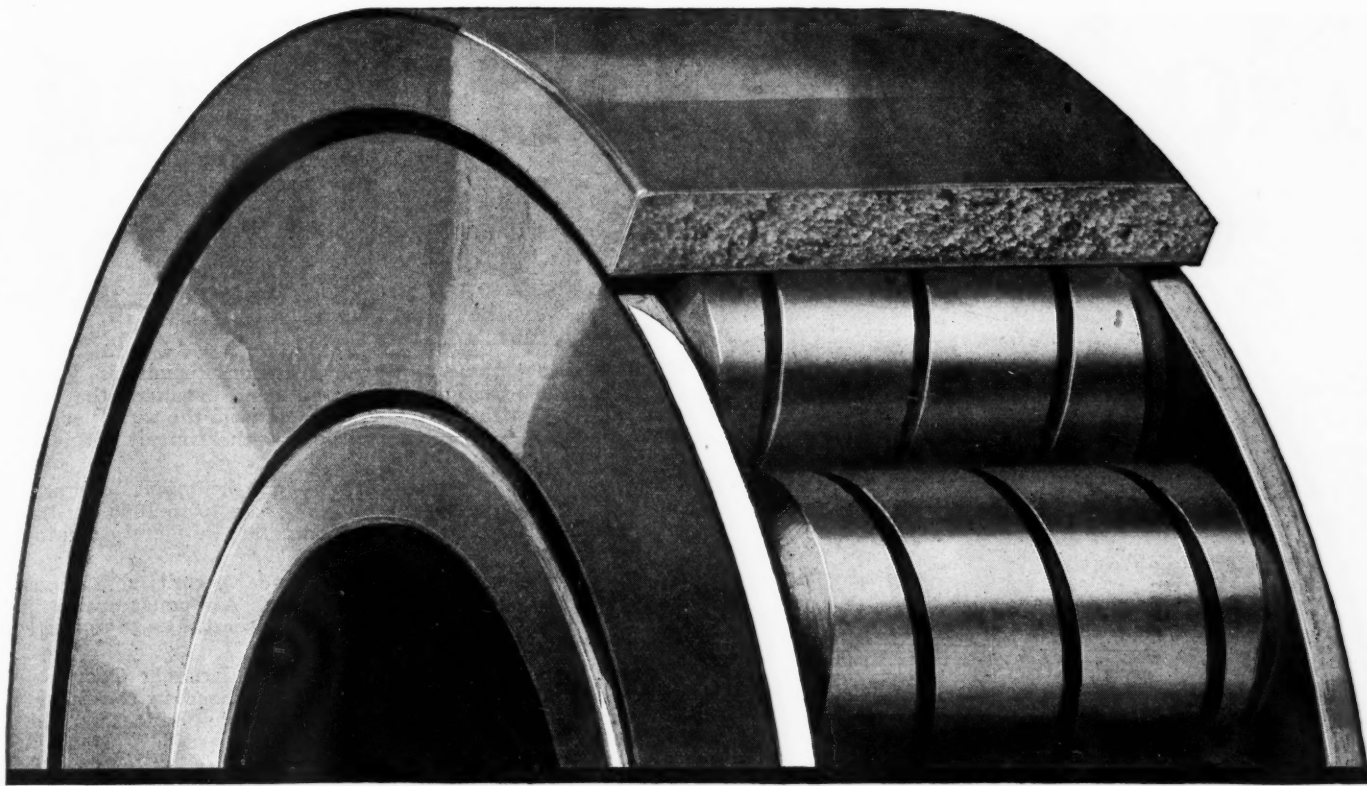
STROM BALL BEARING MFG. CO., 4551 Palmer Street, Chicago

Ze-Zerk  
Zen-Zenth  
(Continued on page 48)  
Var-Varies  
S-Sleeve valve  
X-Xen  
R-Rectifier  
S-Semi-elliptic  
Se-Servo  
OG-Oil  
W-Wick feed  
P-Pressure gun  
I-Internal rear wheels  
R-Three-quarter elliptic  
K-Cone  
f-Fabric  
F-Filter  
Fl-Full floating  
B-F-Both internal and external, four wheels  
Ch-Chain

# Mechanical Specifications of Current Passenger Car Models—Continued

[illegible]





Performance sells cars. It is performance that is built into Hyatt Bearings—Superior Performance—that means trouble free, carefree operation requiring no adjustment.

THE SIGN OF OFFICIAL HYATT SERVICE



HYATT ROLLER BEARING COMPANY  
 NEWARK      DETROIT      CHICAGO      SAN FRANCISCO  
 Worcester      Philadelphia      Charlotte      Pittsburgh      Cleveland



Ze-Zerk  
 Zen-Zenith  
 X-Sleeve valve  
 Y-Yes  
 Z-Balloons on closed models

Q-Quarter elliptic  
 S-Single plate  
 S-Semi-elliptic  
 Sep-Separate

Ow-Oil cups with wick feed  
 P-Single plate  
 Pr-Pressure gun  
 Or-Oil cups

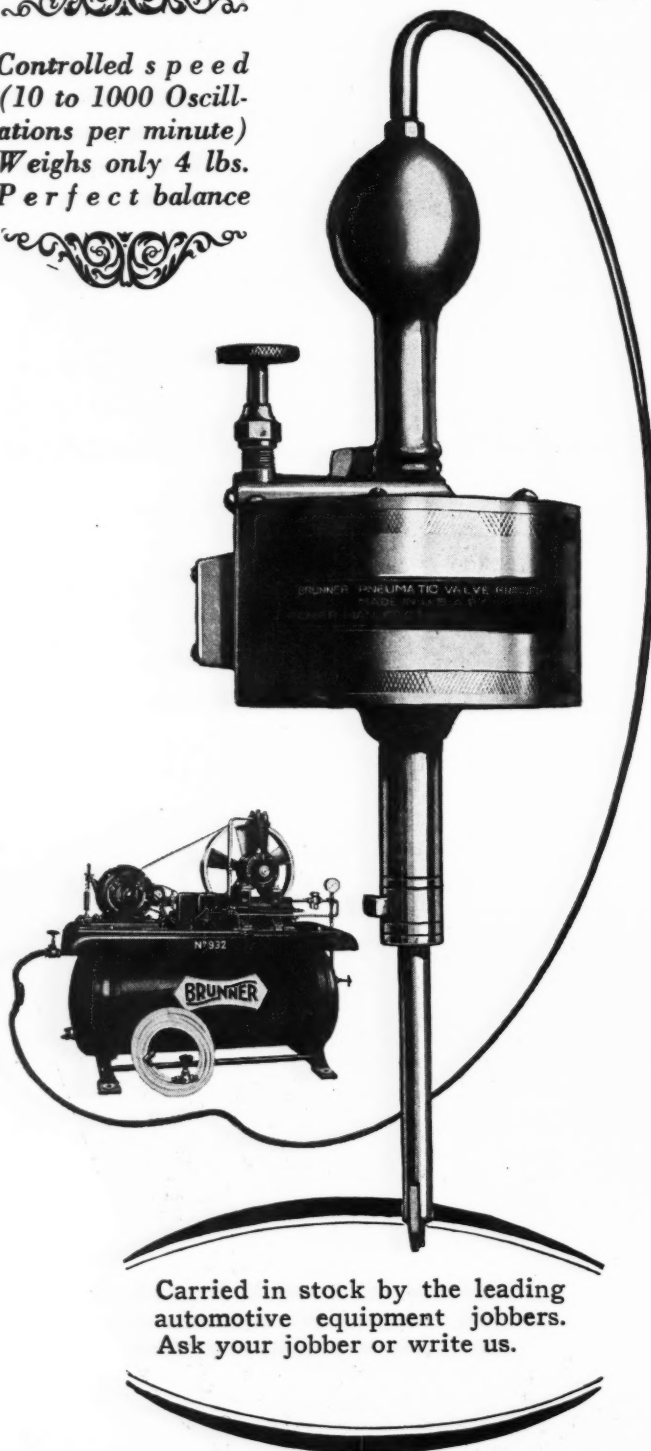
I-R-Internal rear wheels  
 J-Three-quarter elliptic  
 K-Cone

E-T-External transmission  
 F-Fabric  
 F1-Full floating

B-Semi-steel  
 B-K-Both internal and external four wheels  
 Ch-Chain

# No More Grinding Valves By Hand

*Controlled speed  
(10 to 1000 Oscillations per minute)  
Weighs only 4 lbs.  
Perfect balance*



Carried in stock by the leading automotive equipment jobbers. Ask your jobber or write us.

Until the development of the Brunner Pneumatic Valve Grinder, hand grinding or hand finishing produced the best results. Now, with the Brunner Pneumatic the same perfect seat is achieved in but a fraction of the time it formerly required by hand.

Compressed air, the most flexible power known, operates this tool at variable speeds ranging from 10 to 1000 oscillations per minute. The speed is controlled by merely turning the thumb valve.

Its light weight and perfect balance permit continuous operation without tiring the operator. Air consumption is extremely low (approximately 20 lbs. pressure)—any garage compressor will operate it.

Made and guaranteed by the builders of Brunner Compressors, who for twenty years have specialized in the manufacturing of compressors and pneumatic appliances for the automotive industry.

Cut down the time and increase the profits on your valve grinding jobs by installing a Brunner Pneumatic Valve Grinder.

**BRUNNER MANUFACTURING COMPANY**  
Utica, N. Y.

Cincinnati, O. Kansas City, Mo. San Francisco, Cal. Toronto, Ont.



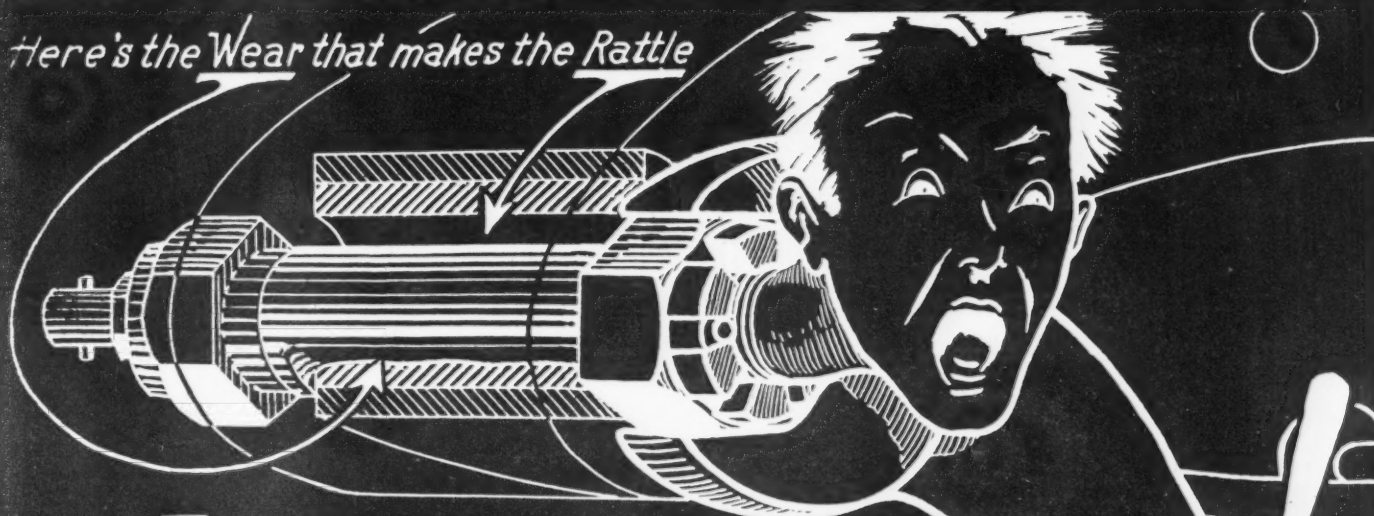
MADE BY THE MANUFACTURERS OF



## Pneumatic Valve Grinder



*Here's the Wear that makes the Rattle*



# If bolts could talk!

**I**F chassis bolts could talk their first utterance would be, "How dry I am". Worn Bolts and Bushings do speak a language all their own, which few Service Men seem to understand.

As cars roll along over bumps and jolts, insufficient lubrication causes the bolts and bushings to wear. Then come rattles and squeaks. A shot of grease stops the agony temporarily but it cannot restore the bolt worn away by friction.

Invariably a wrench is used to strangle the worn bolt into silence, but a wrench can never repair the wear. In fact, it adds the hazard of breakage under strain.

Any Service Man could have done the job right and stopped the squeaks and rattles at slight cost to the owner and a nice profit to himself by renewing the worn parts with Blue Print Bolts and Bushings.

Why Blue Print Bolts and Bushings? Because they are a continuation of original equipment, not replacement parts.

*Chassis Bolt and Bushing renewals are a much neglected opportunity for profit to Garage and Service Men. Are you getting our monthly Bulletins showing the reasons for, and the profits in, Chassis Bolt renewals? If not, write for them today.*

## The Fostoria Screw Co.

302 Blue Print Ave.

Fostoria, Ohio

Export Office: 30 Water St., New York, N. Y. Cable Address: Wldblcco.  
Codes Used: Bentley, A. B. C. 5th Edn., Western Union.



*King Bolts - Spring Bolts - Tie Rod Bolts and Bushings*

**BOLTS BLUE PRINT BUSHINGS**  
THE B.P. LINE

# Airbuoys



Airbuoys are air-springs; hydraulically controlled—the latest and greatest development in smooth, restful riding.

A Lasting Investment—transfer them from old car to new one

## “Those Airbuoys certainly float the car over rough roads”

Quiet—smooth—cushioned serenity—at high speeds or low. Airbuoys are in a class by themselves. “The most remarkable shock absorbers in the world!” They float the car on air and oil and level-out your ride as a dead calm flattens the sea.

**DISTRIBUTORS:** An exclusive Airbuoy contract brings you the best trade in the business. If you can properly care for such trade on a permanent, profitable basis—write us.

**THE RELIANCE MANUFACTURING CO., Dept. A.**

**New Haven, Conn.**

GENERAL DISTRIBUTORS	NEW YORK	BOSTON	CHICAGO
	Veedan Air Spring Co., Inc.	Reliance Sales Corp. of N.E.	Airbuoy Company of Illinois
	PHILADELPHIA	NEW HAVEN	ROCHESTER, N. Y.
	Veedan Air Spring Co., Inc.	Shock Absorber Sales Co.	Kiefer-Reliance Air Spring Co.



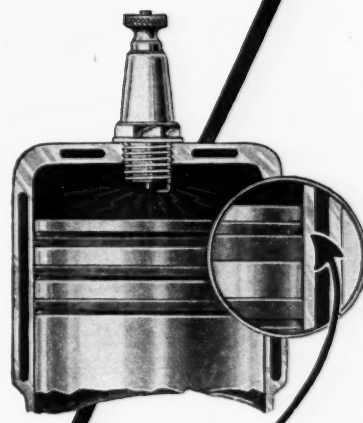
# No One Doubts No-Leak-O Dependability

in preventing crankcase dilution by the effective method of inverting top NO-LEAK-O ring (see diagram). The unvaporized gasoline and coal oil is trapped in the receptive 45° angle groove and forms a packing against itself. On the exhaust stroke it is forced out with the burned gas.

The complete NO-LEAK-O installation is most effective, not only in preventing crankcase dilution but also in maintaining high compression and maximum power. The NO-LEAK-O grooves refill with fresh oil on each stroke and the filled grooves act as a seal or packing between piston and cylinder wall and, because of their depth, hold sufficient oil to act as reservoirs and maintain a positive oil seal.

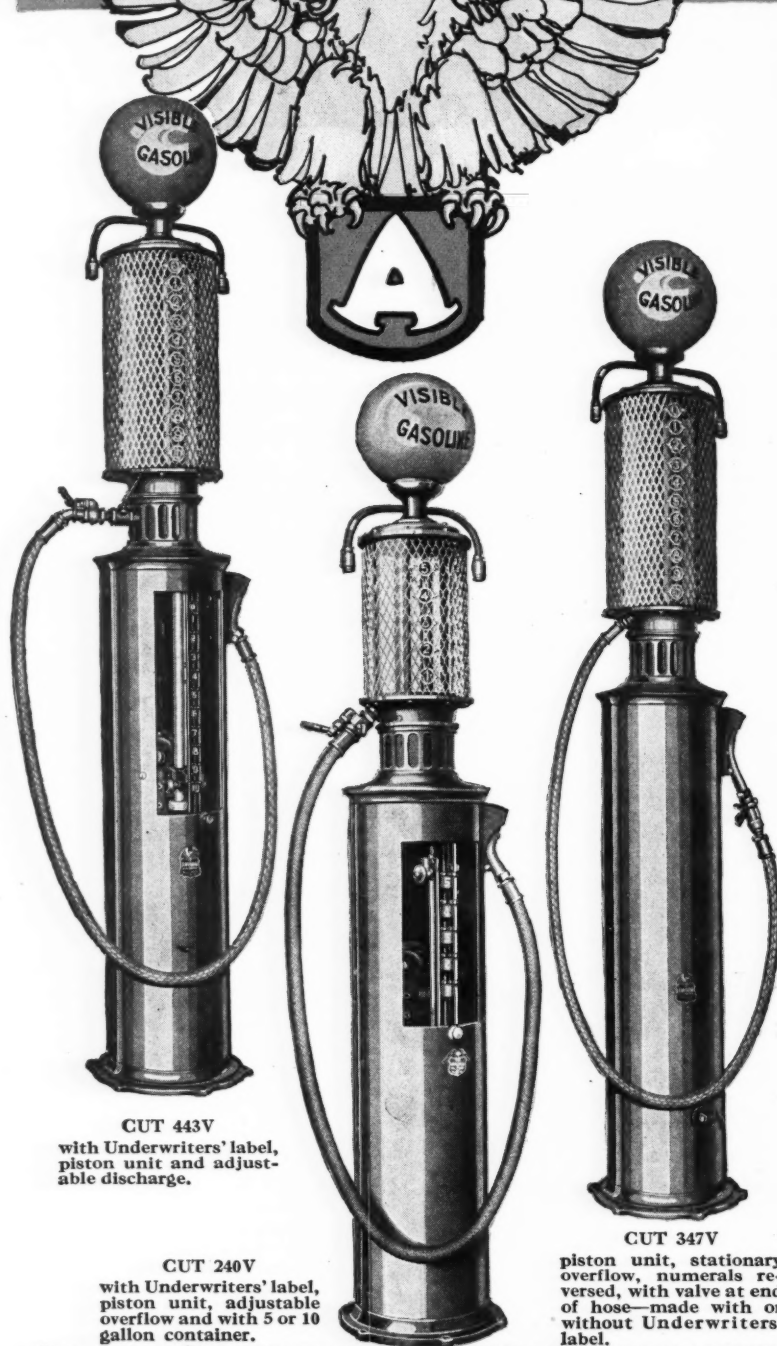
To minimize crankcase dilution and to maintain high compression with a resulting maximum power insist on a complete NO-LEAK-O installation.

Service Division — Oil Ring Department



No Gas Can Pass this Groove Because It Seals with Oil.

# Revolutionary PISTON



CUT 443V  
with Underwriters' label,  
piston unit and adjust-  
able discharge.

CUT 240V  
with Underwriters' label,  
piston unit, adjustable  
overflow and with 5 or 10  
gallon container.

CUT 347V  
piston unit, stationary  
overflow, numerals re-  
versed, with valve at end  
of hose—made with or  
without Underwriters'  
label.

This is the big pump news of 1926—AMERICAN places on the market a Piston Pump Unit that is revolutionary in construction, efficiency and price! This is a real and far-reaching contribution to the gasoline pump industry.

A Piston Pump Unit that is *fool-proof*—that is *not sensitive to dirt or water*—that *will not rust or corrode*, a frequent source of trouble with pumps in the past—and that costs *almost nothing for upkeep*.

This pump unit has the *same quality construction* that heretofore has been put in \$300 to \$400 pumps.

Every man who is interested in gasoline pumps is bound to be interested in this revolutionary addition to the AMERICAN line. It means much to him directly in dollars and cents.

This unit is furnished in all our various types of pumps—with adjustable overflow, with adjustable discharge, and with stationary overflow with valve at end of hose.

Before you place an order for any pump equipment be sure to get the full details of this new American Piston Pump Unit—use coupon below.

AMERICAN OIL PUMP & TANK CO.  
1159 Findlay St., Cincinnati, O.

Please send information and prices on

☐ Cut 443V ☐ Cut 240V ☐ Cut 347V

.....



# new American PUMP UNIT

Note particularly the construction of this piston pump unit as illustrated herewith.

It consists of two double-acting pistons working in two cylinders and with the cranks set at right angles to equalize the pumping action.

The pump is operated by a *continuous* turning of the handle in *either* direction.

The handle turns easily and only 16 turns are required to pump five gallons.

The pistons are provided with the *highest grade* cup leathers that will *last for years*.

Now here is *where* and *how* we overcome the frequent and serious troubles caused by dirt and water getting into the pump, rusting the parts and causing them to stick.

In this unit the pumping is accomplished by the action of the *cup leathers* against the brass cylinder linings, *not* by the sliding of *close fitting metal surfaces*, and grit and sediment will not affect the working of the pistons.

Also, *all working parts* are *non-rusting* material. The shafts and piston pins are Monel metal, the cranks are of bronze, the pistons of brass, and the cylinders brass lined—nothing that water can affect.

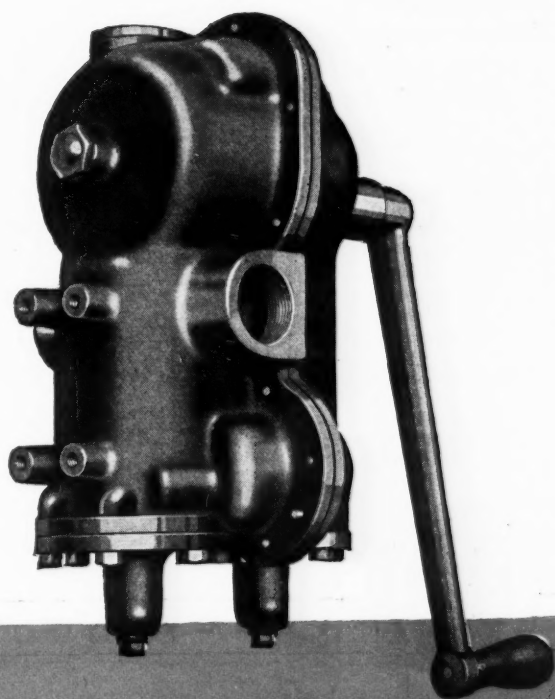
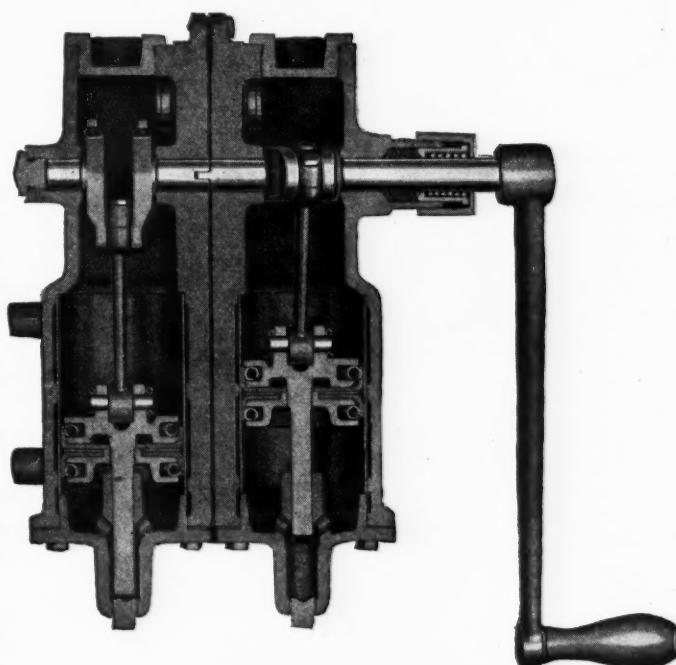
The valves have their seating surfaces placed vertically—there is no chance of sediment lodging on them and causing them to leak.

Plugs in the lower cylinder heads may be removed to drain off water that may collect.

In short, every detail of construction in this pump unit has been carefully worked out to eliminate all forms of trouble—to secure the most efficient operation at the lowest possible cost of upkeep. And long and severe tests of this pump in actual operation have proved the complete success of our efforts.

The American Oil Pump & Tank Co.

1159 Findlay St., Cincinnati, O.



# STEWART-

## Sell Safety!

Sell Safety! It Pays. It is the biggest paying thing you can sell today.

The newspapers are filled with accident news. The big talk everywhere—in every city, town and countryside—is **HOW TO CUT DOWN THE NUMBER OF ACCIDENTS.**

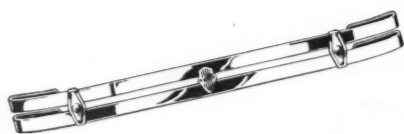
When you tell a new car buyer that a Stewart-Warner Bumper will positively stand between him and injury to himself and his car, he is vitally interested, more so than in the number of miles he is going to get out of a gallon.

When you show him how Stewart-Warner Shock Absorbers will save him from breaking his springs or his neck—he wants them right away.

When you tell him that without a Stewart-Warner Electric Windshield Cleaner he'll be about as well off as a blind man in a snow-storm or the rain, he'll surely want to know where he's driving—for his life and car are at stake.

To save him from paying speed fines—to save his car from oil and grease neglect—he positively needs a Stewart-Warner Speedometer.

So, it's a wonderful opportunity for business and good-will building for you.



### STEWART-WARNER Accessory Family

Shock Absorbers  
Bumpers  
Rear Fender Guards  
Spotlights  
Electric Horns  
Electric Windshield Cleaners  
Rear Vision Mirrors  
Speedometers  
Heaters  
Vacuum Tanks

Stewart-Warner Matched-  
Unit Radio

INSTRUMENTS - TUBES  
REPRODUCER AND  
ACCESSORIES



TWELVE MILLION PEOPLE ARE TODAY



# WARNER



*The  
Stewart-Warner  
Safety Group*

Give your customers accessories that really protect—that have the stuff in them to hold up in every emergency.

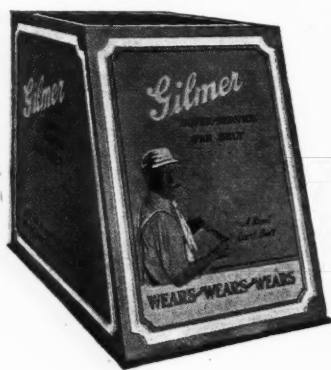
You can depend upon the Stewart-Warner Safety Group to do this  
—UNFAILINGLY!

STEWART-WARNER SPEEDOMETER CORPORATION  
1826 DIVERSEY PARKWAY, CHICAGO, U. S. A.

*Stewart-Warner*



USING STEWART-WARNER PRODUCTS



### Why Gilmer Products Are Best Sellers:

—Because Gilmer products are designed by long-experienced engineers and offer to dealers to sell to their customers the best specially treated fabric that can be made.

—Because they are packed in attractive cartons, that are always neat and easy to handle.

—And because we furnish a counter cabinet in which to display them, as shown above, that truly is a silent salesman.

But, there is still another reason: — *Gilmer Super Service Fan Belts* and *Gilmer Transmission Lining for Ford Cars* are backed by a name that is an accepted standard of quality from coast to coast.

*Attractive display material and special five-shelf display cabinet free — ask your jobber.*

**L. H. Gilmer Co.**  
Tacony, Philadelphia, Pa.



*Van says:*

*"Let that cabinet  
do your selling!"*

# Gilmer

Makers of  
the world's  
best known  
fan belts.

# Gilmer

Also makers  
of dependable  
transmission lin-  
ing for FORDS.

# Gilmer

It's a good  
name for  
dealers to  
tie up to.



# The well posted dealer concentrates his sales efforts on AC products.



He knows that the foremost automotive engineers specify AC products as standard equipment for the very good reason that they perform best. That is the reason for their assured market. Backed by strong advertising, they are sold to motorists without sales resistance. They carry a good margin of profit.

AC-SPHINX Birmingham ENGLAND AC Spark Plug Company, FLINT, Michigan Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners AC-OLEO Levallois-Perret FRANCE

## AC SPARK PLUGS

THE new AC Spark Plug marks the greatest advance made in spark plug construction in years.

A new design, a new alloy for sparking points, a new electrically fused Kyanite insulator core and a new glaze—in a type and size for every motor.

For Fords there is the famous AC 1075, embodying the above improvements as well as many other special features—and it is now made in both one- and two-piece design.

## AC SPEEDOMETERS

THE AC Speedometer for Fords is of the same high quality as furnished for original factory equipment to the manufacturers of Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Oakland, Oldsmobile, Peerless, Pontiac and GMC Trucks.

There is no swivel joint between the front wheel and the instrument—it drives direct—exclusively an AC feature, insuring continuously satisfactory service.

Packed complete with all installation attachments, easily mounted and reasonably priced.

## AC AIR CLEANERS

THE AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor, thereby eliminating excessive wear on the motor's moving parts.

Original factory equipment on Buick, Davis, Locomobile "Jr. 8", Oakland, Nash, Stutz and Willys-Knight "6"—Models available for installation on Chevrolet, Chrysler 4, Dodge Brothers, Ford, Maxwell, Oldsmobile, Star, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.

Packed complete with all installation attachments, easily mounted and reasonably priced.


**Over 2000**

## **Genuine APEX**

### *Nationwide Distribution*

Over 300 big jobbers stock Apex. Over 2,000 salesmen sell them to thousands of dealers in every section of the country.

Recognition has been won and nationwide distribution is an established reality. The same pioneer spirit that developed the product has made it a merchandising success that is unparalleled in its field.

The Apex jobber roster includes many of the biggest distributors in the country; such houses as Chanslor & Lyon Co., San Francisco with seven branches on the coast; Beckley-Ralston Co., Chicago and branches; the Canadian General Electric Co., Toronto, Canada and branches; the Electric Appliance Co., New Orleans, and the Cooper Rubber Co., Cincinnati with six branches, etc.

These firms and many others recognize the fact that the patented Apex design is the only way to make a successful innering and that all others are merely imitations of this guaranteed product.

They know that in this company there is sufficient financial strength to back up that guarantee.

They know too, that had it not been for this company there would be no innering business or profits for anyone.

# **APEX** GENUINE **Innerings**



# Jobber Salesmen Sell

## Innerings



### Only Apex Can Fit Every Job Successfully

Genuine Apex Innerings are adjustable. Between your finger and thumb you can straighten out the short rounded points of contact and make a *softer* cushion. Or by crimping over your finger tip, you can make a *stronger* cushion.

This exclusive "adjustable" feature makes Genuine Apex Innerings universally successful. For only with Apex "adjustability" can you make piston rings fit tapered and egg-shaped walls. Only with Apex "adjustability" can you properly centralize round pistons in out-of-round cylinders.

Made from the finest imported Swedish Steel to our own specifications, and tempered to the highest possible point of toughness and flexibility which makes the most practical material available for proper cushioning and adjustability. This is largely responsible for Apex enviable reputation and superiority over ALL imitations. Tested to resist heat up to 900° F.; guaranteed to stop oil pumping and piston slap and renew motors without reboring.

#### Dealers

You can make more money than ever on "APEX" with our new dealer discount. If your favorite jobber does not stock "APEX" accept no substitute. Send order to us.

#### Jobbers

Country-wide distribution with greatly increased production makes a new jobber discount possible. Write for it.

THOMSON MANUFACTURING CO.  
Dept. 7, Peoria, Ill.

### Only **APEX** Design

#### Can Stop Oil Pumping and Piston Slap Successfully

To centralize the piston, stop the slap and NOT increase the wall pressure is impossible without the Apex long reverse curve.

To make the ring face work flush with the cylinder wall, stop oil pumping in any motor and NOT interfere with the oil film is impossible without the Apex adjustable short curved crimp.

To renew power, performance and pick-up and NOT cause excess wear on cylinder wall and ring face is impossible without both of these exclusive Apex features.

Genuine Apex Innerings are the only ones that can give you this fundamentally correct design. They alone are backed by the guarantee that leaves no room for doubt.



Short rounded points of contact found only on Genuine Apex Innerings. Cannot break. Others have sharp crimps.



Long reverse curves, found only on Genuine Apex Innerings, gently hold the piston rings in place while the shorter rounded points of contact centralize and stabilize the pistons and stop oil pumping and piston slap without exerting harmful outward pressure on the piston rings.



Cutting between the crimps (not at the crimp) assures equal radial cushion the entire diameter of the Innering.

There is no weak side in the Genuine Apex

# APEX GENUINE Innerings



# The Double

Two outstanding sixes, each contributing to the success of the other: two sound businesses and two substantial profits with one modest investment—these are the unique advantages which far-sighted automobile merchants see in the new Oakland-Pontiac double franchise.

The phenomenal increase in Oakland Six sales alone—16th to 9th place in the industry in the past few months—is holding the attention of veteran automobile dealers all over the country.

Now, with the added sales possibilities of the new Pontiac, offering new fine quality in a

WINNING AND HOLDING GOOD WILL  
**OAKLAND SIX**  
PRODUCT OF GENERAL MOTORS





# Franchise

low priced six, comes an unparalleled opportunity for redoubled profits to holders of the Oakland-Pontiac double franchise.

Together Oakland and Pontiac provide nine beautiful open and closed models whose price range, \$825 to \$1295, includes in its scope the two richest fine-car markets in the world.

Here is double opportunity—double profit—a chance for a forward looking automobile merchant to make a permanent connection on which he can build not only immediate profits, but permanent success.

C H I E F   O F   T H E   S I X E S

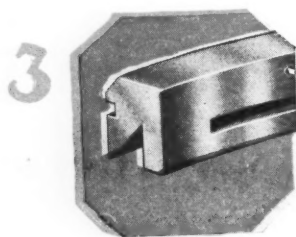
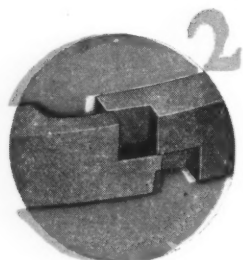
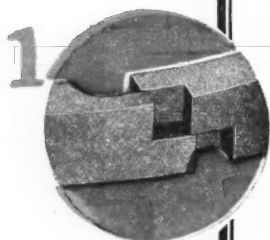
# PONTIAC SIX

P R O D U C T   O F   G E N E R A L   M O T O R S

# Remember -

## When YOU sell Piston Rings

### YOU are the Doctor



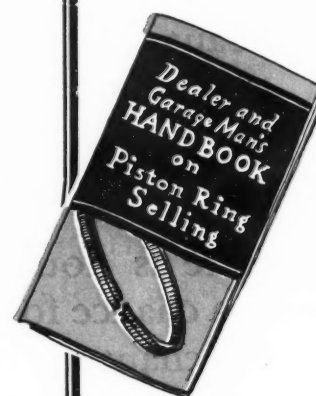
The Economy Oil Ring

**R**X At the first opportunity spend a pleasant three minutes telling the motorist about the new Gill Combination of rings. You will get his "go ahead" before you know it and instead of making \$1.80 on the rings, **you will make a clear \$3.20.** You will admit that you never made this extra profit any easier.

**Every** garageman is a salesman when it comes to selling the Gill Combination of piston rings. You are the doctor and your motorist-customer will take your word for what is best for his engine. And you can take ours that the Gill Combination is best and this little selling proposition **works.**

Would you like to have the Gill Wall-Chart of Piston-Ring Sizes —Invaluable to you.

Send us your name. It's free. The Gill Manufacturing Co., 8300 South Chicago Avenue, Chicago, Ill.



TWENTY MINUTES with this little booklet will show you the knack of selling piston rings. Everybody's reading it. Send for yours. It's free.

# The Gill

## Combination



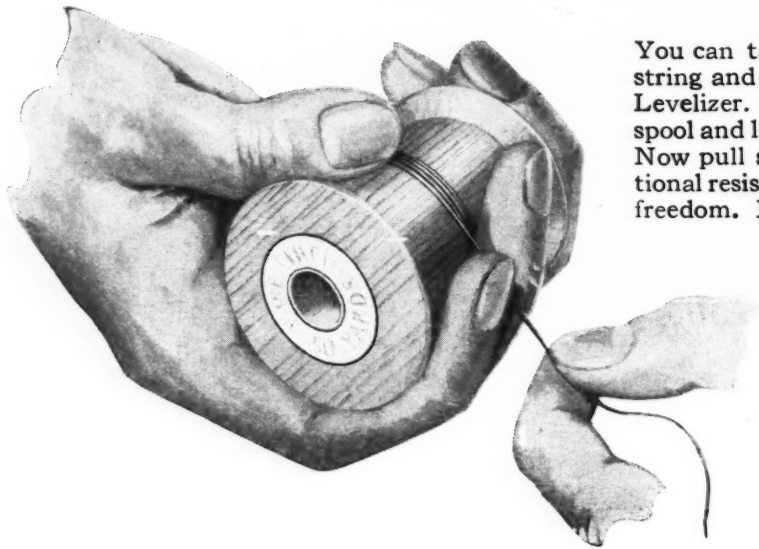
# Announcement Extraordinary!



## *The* **WEED** *Levelizer*

*which "levels the road as you go"*  
*For all makes of cars*

# You can prove this Wonderful New with a spool and piece of string



You can take a common wood spool and a piece of string and demonstrate the operation of the WEED Levelizer. Wrap the string several times around the spool and let the loose end hang between your fingers. Now pull slowly and steadily and you get some frictional resistance but the spool turns with comparative freedom. Now wind the string on the spool again, let the loose end hang, and instead of pulling slowly, jerk the string quickly. **The frictional resistance increases with the speed of the pull on the string.** In the WEED Levelizer, a floating drum is the spool, a special steel cable is the string and a short strip of friction material takes the places of the fingers. The result of this simple mechanism is at once the simplest and the most efficient of checks.

## *The Levelizer* regulates resistance by speed of car body movement

Now this entirely new way of obtaining riding comfort is ready for the public. It will be advertised and recommended by the well known and reliable makers of WEED Chains and WEED Bumpers — the American Chain Company, Inc. That statement alone is sufficient warrant of the Levelizer's merit and worth as desirable merchandise.

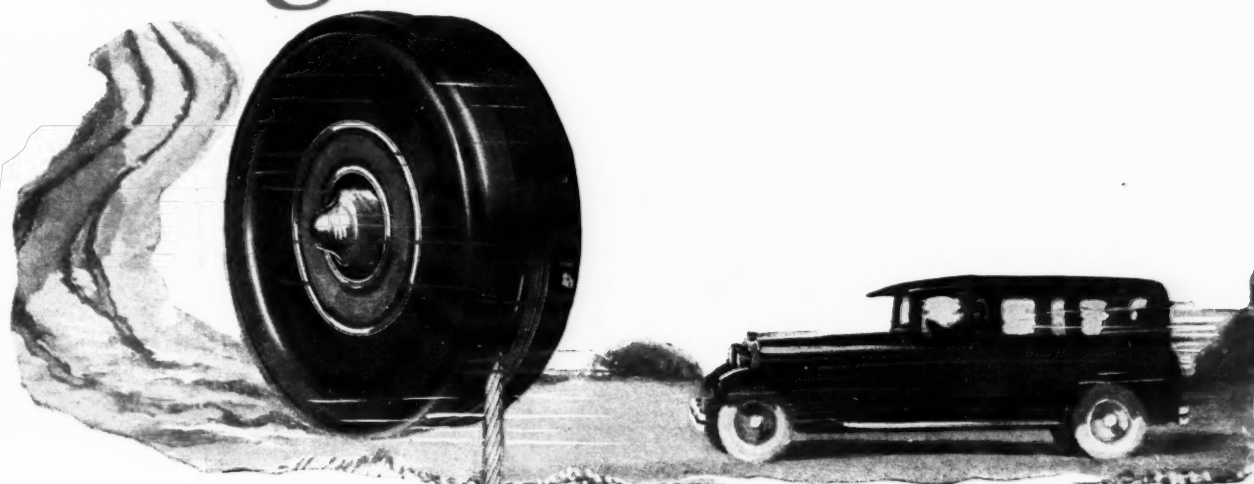
In selling the Levelizer to your trade you will not be faced with the nuisance and expense of service adjustments, and the car owner will not be bothered with oiling, squeaking and binding.

- 
1. Some devices offer strong initial resistance.
  2. Others offer weak initial, strong final resistance.
  3. Some—too rigid—give a steady, jerky sensation.
  4. The Levelizer maintains smooth resistance.

See the new **WEED**



# Riding Comfort



## Amazingly Simple and Simply Amazing



The WEED Levelizer is a one way acting device of the cable and drum type, allowing the car springs to compress freely but regulating their recoil. The result produced is caused by the joint action of the springs, reel and friction lining, nothing else. It is extremely simple and rugged in construction. Thereby uniform and correct results are obtained without fussy, make-shift adjustments.

In WEED Levelizers, resistance is automatically built up with the force of the "throw" until the highest point is reached. This resistance is based not on car weight, but on upward speed of body movement. Thus WEED Levelizers prove effective under all conditions.

**It will be a leader at once**

If you haven't stocked WEED Levelizers, be sure to learn about them. Write for descriptive booklets and price lists.

Address the American Chain Company, Inc.; Bridgeport, Connecticut. In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario.

# Levelizer



## **WEED Levelizers**

have been proved out through the most rigorous and scientific tests of riding comfort, by the American Chain Company, Inc.

We recommend this new product to the trade; it is fully worthy of the name WEED which we zealously uphold in making

**WEED CHAINS**  
*and*  
**WEED BUMPERS**

write for name of your nearest distributor:

**AMERICAN CHAIN COMPANY, Inc.**  
Bridgeport, Connecticut

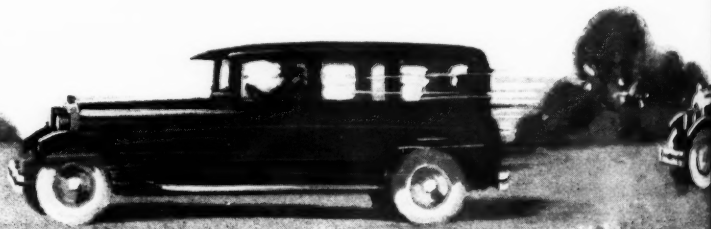
*In Canada:*

DOMINION CHAIN COMPANY, Limited, Niagara Falls, Ont.

**District Sales Offices:**

Boston	New York	Pittsburgh
Chicago	Philadelphia	San Francisco

*World's Largest Manufacturers of Welded and Weldless Chain for all Purposes*  
Write for name of your nearest distributor.





ZENITH

You Can Now Supply Your Trade  
with a

# ZENITH

## CARBURETOR

completely equipped, tested and with proper setting, for quick and easy installation on 86% of all registered cars. Each outfit comes carefully packed in an individual box with full installation instructions.

Auburn .....	\$17.00	Maxwell .....	\$14.90
Cadillac 51-57 .....	37.50	Moon .....	17.00
Cadillac 59-61 .....	60.00	Oakland 6-54 .....	16.00
Chevrolet 490 .....	12.50	Oldsmobile 1923-5 .....	13.50
Chevrolet K .....	12.50	Oldsmobile 1926 .....	17.60
Chrysler 4 .....	14.90	Overland 4 .....	13.50
Chrysler 6 .....	30.00	Overland 6 .....	14.00
Cleveland .....	16.75	Packard 116-126 .....	38.00
Columbia .....	17.00	Packard Truck .....	50.00
Davis .....	17.00	Reo 6 .....	21.50
Dodge .....	19.00	Reo Speed Wagon .....	15.00
Durant A-22 .....	15.00	Star .....	16.55
Essex 6 .....	22.50	Studebaker Light 6 .....	13.50
Elcar .....	17.00	Studebaker Standard 6 .....	14.50
Flint 40 .....	15.00	Studebaker Special 6 .....	28.50
Ford .....	9.50	Studebaker Big 6 .....	30.55
Gardner 4 .....	15.00	White G O & G N .....	27.50
Gray .....	14.50	White G K .....	27.10
Hudson .....	22.50	White G E C .....	31.50
Hudson Dual .....	57.50	White G M .....	29.50
Hupmobile R .....	13.50	White G A .....	29.00
Mack A B .....	37.50	Willys-Knight 4 .....	19.00
Mack A C .....	40.00	Willys-Knight 6 .....	21.00

The Zenith Carburetor gives the owner the same dependable carburetion that made possible the first trans-Continental, trans-Atlantic and trans-Pacific flights, the epoch-making "round the world" flight and many other notable achievements on the land, in the air and on the water. When human life hangs on dependable carburetion, the Zenith is chosen. *There is a Zenith for every make of car or truck.*

*Write for special descriptive literature and dealer's proposition.*

## ZENITH-DETROIT CORPORATION

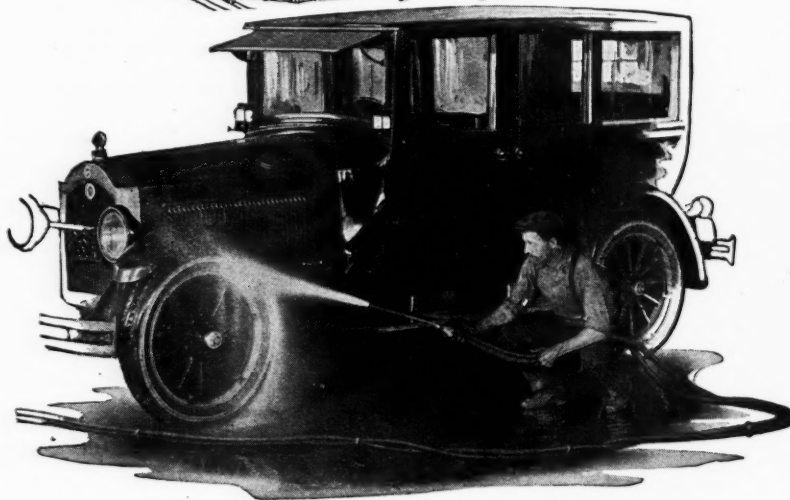
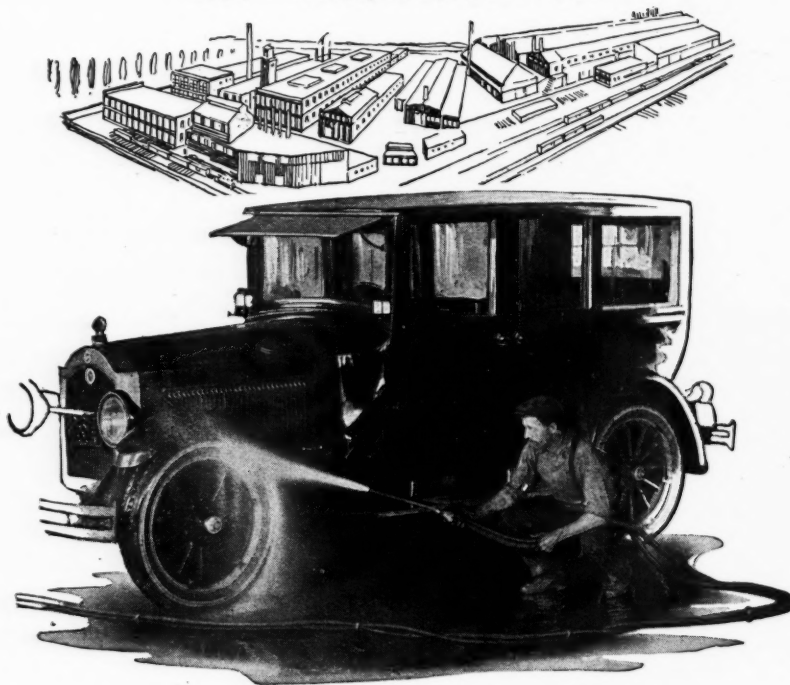
Branches:  
NEW YORK  
CLEVELAND  
CHICAGO

Manufacturer of  
**ZENITH CARBURETORS**  
Over 1200 Service Stations

MAIN OFFICE  
and FACTORY  
DETROIT  
MICHIGAN

# CURTIS

1854 - Seventy two years - 1926



## A successful car-washing system must be engineered—not assembled.

You can't count on satisfactory work from make-shift apparatus. An ordinary water hose hitched to an Air Compressor is **not** a car-washing system. A real car-washing system is just as much of an engineering job as building an automobile. The Curtis Air-Mist Washing System is built from a manufacturing background 71 years old. It is designed by engineers of world-wide reputation—manufactured in a giant plant covering 17½ acres, and perfected

by 7 years' careful experimenting in the field. The Curtis staff of technical experts have an international reputation. Their experience and skill, backed by the tremendous Curtis resources and manufacturing facilities have resulted in building a car-washing system at a price as low as the ordinary assembled outfit.

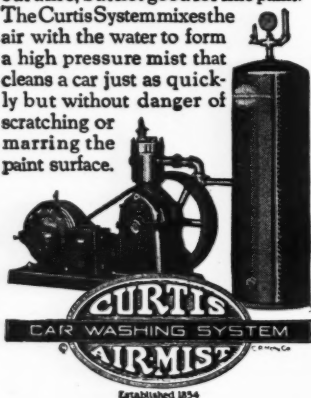
A car-washing system is too important an investment to gamble with "unknown qualities" when such a product as Curtis is available.



With this Curtis Flow Meter you can quickly ascertain the proper Curtis Air-Mist System for your needs.

**REMEMBER**  
The Curtis Car

Washing System operates on an air-mist principle, entirely different from all others. Other systems work on a fire engine principle of simply increasing the water force by means of air or other pressure—fine to put out a fire, but not good for fine paint. The Curtis System mixes the air with the water to form a high pressure mist that cleans a car just as quickly but without danger of scratching or marring the paint surface.



Instead of being profitless and "a nuisance," a car washing business becomes profitable and easy to handle when the Curtis Air-Mist Washing System is installed.

Mail this coupon  
for free illustrated booklet.

CURTIS Pneumatic Machinery Co.  
1527 Kienlen Ave., ST. LOUIS, MO.  
Branch Office: 530-H Hudson Terminal, New York  
Gentlemen—Please send me full details on Curtis Air Mist Washing System and quote prices  
Name.....  
Address.....  
Jobber's Name.....  
Address.....  
[Ask about Air Compressors and Air Stands.]





*for Economical Transportation*

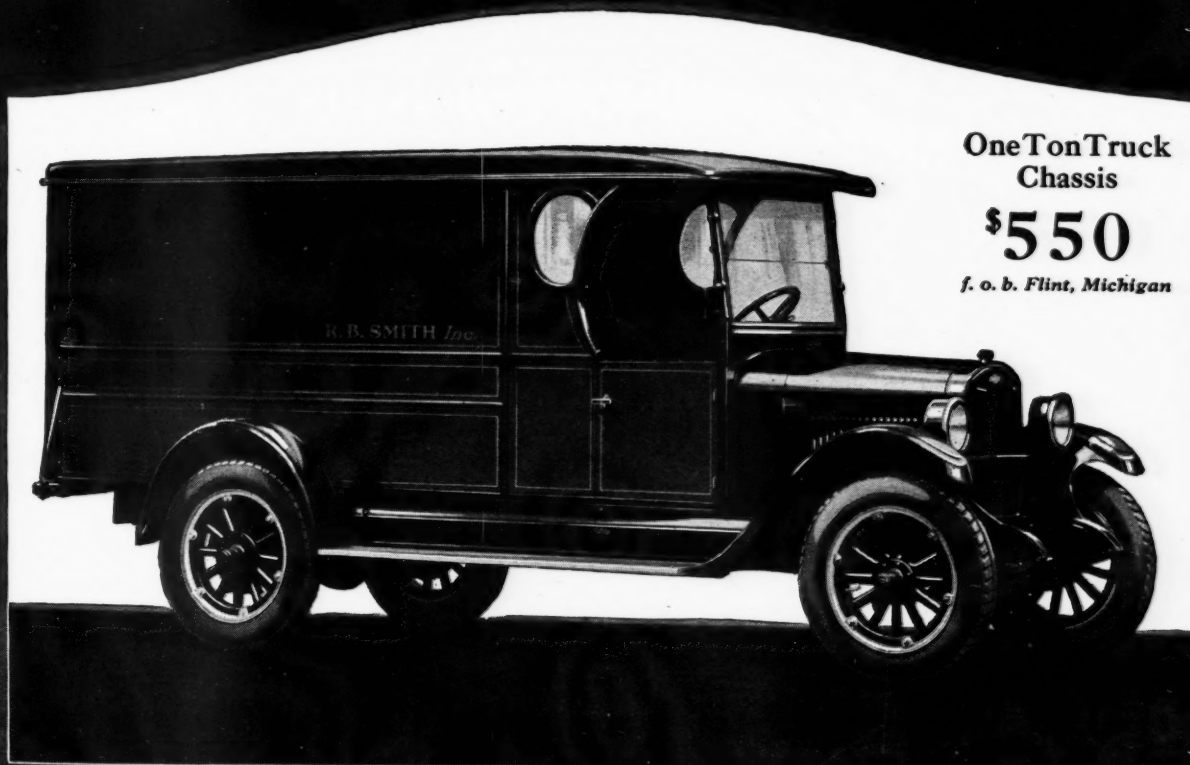
# *The* World's *third* Largest Builder of Trucks

Twelve great factories! Manufacturing facilities and engineering equipment of a quality unsurpassed in the automobile industry! Two basic models with a wide variety of attractive bodies—selling at strikingly low prices! Durable, powerful chassis design especially developed to give reliable,

economical haulage under all conditions! Dealers and service stations everywhere, stocked with parts to render prompt, low-cost service! An extremely attractive and economical time payment plan! That's why Chevrolet ranks as the third largest builder of motor trucks in the world.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN

*Division of General Motors Corporation*



One Ton Truck  
Chassis

**\$550**

*f. o. b. Flint, Michigan*

## QUALITY AT LOW COST

# IN APRIL 1924

—after DUCO had been on the market for about two months, an advertisement in The Saturday Evening Post announced with considerable pride that DUCO was being used by three automobile manufacturers.

**AN EPOCH-MAKING DISCOVERY—  
A NEW FINISH FOR MOTOR CARS**

**AFTER TWENTY-ONE MONTHS  
OF SEVERE SERVICE, DUCO  
FINISH LOOKS BETTER  
THAN EVER**

Give Rock, Solid-like Lustre, Uniform Appearance,  
Only the Corresponding Reason—Ducol is  
25 Times Superior to Wax

**DUCO**

**ACCEPTANCE of**

**First a WHISPER—  
now the**

**THUNDER  
of appreciation for  
DUCO**

From the corner of an epoch-making finish for automobiles—then the announcement that the DUCO (Ducol) finish was the perfect one—was the first step in the history of the DUCO finish. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world.

The rich base of DUCO finish is made in great quantities and is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world.

The use of DUCO finish is rapidly increasing and is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world.

The public demands DUCO finish as a standard of excellence in motor cars. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world. The DUCO finish is the only one that has been accepted by the public as the best in the world.

**DUCO**

**In 1925**  
By "Show" time, 1925,  
the number of makers  
using DUCO had  
grown to 19.

There is only ONE Duco . . . .



# DUCO



## An Ever widening Flood.....

AT this year's Shows DUCO was well-nigh universally accepted. They were Automobile Shows... but more than that, they were DUCO Shows. The names of more than thirty motor car manufacturers are now displayed in all DUCO advertising with mutual pride on the part of du Pont and of the manufacturers.

### In 1926

wherever you looked, as you walked through the Shows, you saw DUCO...for 31 manufacturers of leading cars are using DUCO.

### Their Vision

### has added the Finishing Touch!

...The Enduring Beauty of DUCO

COMPARE the superbly efficient motor cars of today with the standard, mediocre automobiles of a few years ago. What changes have been wrought? What beauty and mechanical perfection have been attained through the years, both through the vision of the leaders of the industry?

There now have appeared constructive thought and best judgment in the highest sense of the word. The motorist's eye has been trained to see the difference between the appearance of all automobiles...

...and the possibility of adding a single desirable quality has always outweighed the cost or inconvenience such a change might involve.

It is this unselfish devotion to the ideal of greater service which has given to the world motor cars with greater power, greater comfort, greater beauty of line and color... and more.

**The ENDURING Beauty of DUCO!**

It is quite natural that these forward-looking makers should immediately recognize in DUCO the revolutionary difference in appearance and service, which distinguishes it from all comparable, obsolete finishes.

...and that they should want to you, in these DUCO-financed cars, the visible evidence of enduring beauty.

What are you waiting for? A complete line of DUCO products is available in all the leading paint and varnish stores.

**There is only ONE Duco**  
DU PONT Duco

# DU PONT Duco

Made by E. I. du Pont de Nemours & Co., Inc., Chemical Products Division, Parlin, N. J., Detroit, Mich., Flint, Mich., Chicago, Ill., San Francisco, Cal., Everett, Mass., or Flint Paint & Varnish Limited, Toronto, Can.

## Fisks Built Up Volume When Unknown Brands Retarded Progress

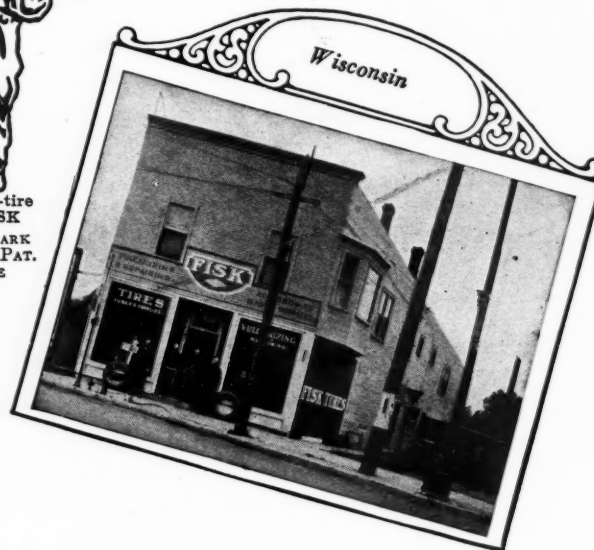
*Decide Now to Profit by the Experiences of These Two Merchants*



Indiana



Time to Re-tire  
Get a FISK  
TRADE MARK  
REG. U. S. PAT.  
OFFICE



Wisconsin

This dealer started in tire business in 1915. Having experience with all makes of tires in the vulcanizing business, he decided to take on the Fisk Line exclusively.

The business has been built up from practically nothing to \$38,000 a year on the Fisk Line. Ref. No. 18—Indiana

Another dealer started in the tire and vulcanizing business about five years ago (1920) but did not progress selling an unknown brand of tires.

He, then, decided to take on the Fisk Line with an initial order of \$200 and his first year's business amounted to \$1,000. In 1923 he moved to larger quarters and his volume of business for the year was \$6,000. It is anticipated that his volume for 1926 will be approximately \$15,000.

Ref. No. 19—Wisconsin

THE FISK TIRE COMPANY, Inc.

Chicopee Falls, Mass.

# FISK

## TIRES



# BROWN-LIFE GEAR

## DISTRIBUTORS

### CALIFORNIA

Fresno—Colyear Motor Sales Co., 1236 Fulton St.  
Long Beach—Superior Automotive Equipment, Inc., 2345 E. Anaheim St.  
Los Angeles—Colyear Motor Sales Co., 1222-28 So. Hill St.  
Oakland—Colyear Motor Sales Co., 2315 Broadway.  
San Diego—Standard Motor Parts Co., 2nd and "B" Sts.  
San Francisco—Colyear Motor Sales Co., 1247 Van Ness Ave.

### COLORADO

Denver—Gall Auto Specialty Co., 1322 Lincoln St.

### CONNECTICUT

New Haven—Gorey Automotive Parts Co., 67 College St.

### DISTRICT OF COLUMBIA

Washington—Quaker City Motor Parts Co., 2020 14th St., N. W.

### FLORIDA

Miami—Miller Motor Parts Co., 2035 N. Miami Ave.

### GEORGIA

Atlanta—Motor Parts Corporation, 253-255 Ivy St.

### ILLINOIS

Chicago—North Side Unit Parts Co., 5342 Broadway.  
South Side Unit Parts Co., 6515 Cottage Grove Ave.  
Standard Unit Parts Corp., 1712 So. Michigan Ave.  
West Side Unit Parts Co., 3941 W. Washington Blvd.  
Alton—Alton Motor Parts Co.  
Belleville—Knab Motor Co.  
Carbondale—Meyers Garage  
E. St. Louis—Hudson Auto Supply, 6th and State Sts.  
Harrisburg—Rogers Auto Supply  
Herrin—Bruce Auto Supply  
Mt. Vernon—Automotive Service  
Pana—Kuhn Bros.  
Peoria—Peoria Auto Parts Co., 817 So. Adams St.  
Springfield—Armstrong Auto Parts

### INDIANA

Ft. Wayne—Main Auto Supply Co., 215 West Main St.  
Indianapolis—Central Motor Parts Co., 409 N. Capitol Ave.

### IOWA

Davenport—Horst & Wilkinson Co.  
Des Moines—Standard Motor Parts Co., 1310 Grand Ave.

### KANSAS

Wichita—Goodin Motor Service Co., 333 S. Lawrence Ave.  
Winfield—L. Moore Implement Co., 1107 S. Main St.

### KENTUCKY

Bowling Green—Economy Car Parts Co.  
Lexington—The O. W. Murphy Co.  
Louisville—Edinger Motor Parts Co., 205 Broadway, E.

### MAINE

Portland—J. E. Gool & Co., 201 Federal St.

### MARYLAND

Baltimore—Quaker City Motor Parts Co., 1213 Maryland Ave.  
Frederick—E. B. Shipley, 105 W. Patrick St.

### MASSACHUSETTS

Boston—Campbell Motor Parts Corp., 709 Beacon St.  
Fitchburg—Christie & Thomson, 542 Main St.  
Haverhill—J. O. Ellison, Middlesex St.  
New Bedford—Shuster Co., 1519 Purchase St.  
Springfield—The Parmenter Co., 680 Main St.  
Worcester—Christie & Thomson, 216 Harding St.

### MICHIGAN

Bay City—Northern Auto Supply Co., 911 No. Water St.  
Benton Harbor—Vans Auto Parts and Gears  
Detroit—Automotive Parts Corp. of Mich., 6150 2nd Blvd.  
Flint—Flint Automotive Sales, 504 No. Saginaw St.  
Grand Rapids—Automotive Parts Corp., of Mich., 21 Lagrave Ave., S. E.  
Kalamazoo—Auto Parts Distributing Co., 145 W. Kalamazoo Ave.  
Muskegon—Motor Rebuilding & Parts Co., 941 Terrace St.  
Saginaw—Northern Auto Supply, 817 E. Genesee Ave.

### MINNESOTA

Minneapolis—Stand. Unit Parts Corp., 1020 La Salle Ave.

### MISSOURI

Cape Girardeau—Auto Tire and Parts Co.  
Jefferson City—John H. Rodeman  
Joplin—Lewis Machine Co., Second and Joplin Sts.  
Kansas City—General Auto Parts Co., 1621 Grand Ave.  
Kirkville—J. Burdman  
Macon—J. D. Bowman  
Moberly—Goddard White Co.  
Poplar Bluff—C. & A. Machine Co.  
St. Louis—Authorized Motor Parts Corp., 3150 Locust St.

### NORTH CAROLINA

Raleigh—Motor Bearings and Parts Co.

### NEW JERSEY

Atlantic City—Cuskaden Auto Supply Co., 3017 Atlantic Ave.  
Newark—Gorey Automotive Parts Co., 24 Williams St.  
Trenton—J. Harry Hearnen, Front and Warren Sts.  
Ufert Auto Parts.

### NEW YORK

Albany—Gorey Automotive Parts Co., 156 Central Ave.  
Binghamton—Rose Unit Parts Corp., 29 Susquehanna St.  
Brooklyn—Gorey Automotive Parts Co., 1369 Bedford Ave.  
Buffalo—Unit Parts Corporation, 1487 Main St.  
Lockport—Lockport Cylinder Grinding Co.  
Medina—Medina Cylinder Regrinding Co.  
New York—Gorey Automotive Parts Co., 354-6-8 W. 50th St.  
Niagara Falls—James Mullane, 10th St. and Buffalo Ave.  
Olean—Cunningham & Moore, 236 No. Union St.  
Rochester—Genuine Parts Sales Inc., 283 Andrews St.  
Stapleton—Wagner Auto Parts.  
Syracuse—Harry T. Allen, Inc., 518 So. Clinton St.  
Utica—Stiefvater Electric Co., 320 Lafayette St.  
Watertown—Garland City Parts Corp., 250 Factory St.

### OHIO

Akron—The Hardware & Supply Co., 475-535 S. High St.  
Ashtabula—Sanborn Motor Equipment Co., Elm and Center Sts.  
Bellefontaine—Peoples Tire and Supply Co.  
Canton—Canton Auto Gear and Parts Co., 402 2nd St., S. E.  
Celina—Cron Tire & Supply Co.  
Chillicothe—Hodgdon & Grove Auto Parts Co., 94 Water St.  
Cincinnati—The Patterson Parts Co., 118 E. 8th St.  
Cleveland—The Automotive Parts Co., of Ohio, 1854 E. 23rd St., at Chester Ave.  
Columbus—Automotive Parts Co., of Ohio, 218 E. Gay St.  
Dayton—Huber Fireproof Garage Co., 120 W. 4th St.  
Galion—Plack Auto Supply Co.  
Hamilton—West Side Motor Company.  
Kenton—The Bonnell Auto Supply Co.  
Lima—The Siferd Hossellman Co.  
Logan—The Ferd Hack Auto Supply Co.  
Mansfield—Fox—The Tire Man.  
Marion—Lawrence Auto Supply Co.  
Marysville—Marysville Auto Parts Co.  
Mt. Vernon—Vine St. Motor Supply Co.  
New Philadelphia—West End Garage, 718 Fair St., W.  
Portsmouth—Portsmouth Auto Supply Co., 631 Gallia St.  
Ravenna—H. A. Clark Accessory Store, 415 W. Main St.  
Sidney—The Sidney Auto Parts Co.  
Springfield—H. G. Root Co., 116-118 Washington Pl.  
Steubenville—Mayers Hardware & Auto Parts Co., 230 No. 5th St.  
Toledo—Automotive Parts Corp. of Mich., 1013 Jefferson Ave.  
Troy—Miami Auto Parts Co.  
Urbana—Harmstead & Holding.  
Van Wert—Van Wert Motor Supply Co.  
Wapakoneta—Rufus B. Wahrer.  
Warren—Warren Cylinder Grinding Co.  
Washington—C. H. Dunn Auto Supply Co.  
Youngstown—Auto Gear & Parts Co., 143 E. Woodland Ave.

### OKLAHOMA

Oklahoma City—Brittain Bros., Inc., 27 West 3rd St.  
Ponca City—Nickles & Gentry, 201 S. First St.

### OREGON

Portland—Colyear Motor Sales Co., 8th and Couch Sts.  
Salem—W. E. Burns, High St., at Ferry.

### PENNSYLVANIA

Allentown—Quaker City Motor Parts Co., 45 S. Sixth St.  
Altoona—Genuine Standard Motor Parts Co., 2400 Beale Ave.  
Easton—Standard Auto Parts Co., 1810 Freemansburg Ave.  
Harrisburg—Quaker City Motor Parts Co., 4 So. 11th St.  
Johnstown—Johnstown Automobile Co., 101 Main St.  
Lancaster—Rosey Auto Parts Co., 40 N. Market St.  
New Castle—Elliott & Waddington, 19 No. Jefferson St.  
Philadelphia—Quaker City Motor Parts Co., 2512 N. Broad St.  
Pittsburgh—Superior Motor Parts Co., 5614 Penn Ave.  
Pottsville—George M. Beale, 204 S. Centre St.  
Reading—Reading Auto Parts Station, 611 Franklin St.  
Scranton—D. G. Nicholas Co., 533 Wyoming Ave.  
Shamokin—Shamokin Auto Parts Co., 711 N. Rock St.  
Uniontown—Craig Motor Service Co., 286 E. Fayette St.  
Warren—H. J. Onions Machine Co.  
Washington—Washington Auto Parts Co., Jefferson & Chestnut Sts.  
Wilkes Barre—Kishner Motor Parts Co., 76 N. Main St.  
Williamsport—United Motor Parts Co., 137 E. Fourth St.  
York—Piperberg Auto Parts Co., 355 West Market St.

### RHODE ISLAND

Providence—Rhode Island Motor Parts, 314 Dean St.

### SOUTH CAROLINA

Columbia—Whitton Genuine Parts Co.

### TENNESSEE

Knoxville—Service Auto Parts Co.  
Memphis—Standardized Parts Corp., 360 Monroe Ave.

### TEXAS

Beaumont—Simmonds Motor & Machine Co.  
Corsicana—Fred Allison Motors Co.  
Dallas—Motor Parts Depot, Inc., 1108 S. Ervay St.  
El Paso—Car Parts Depot, Inc., 810 Texas St.  
Ft. Worth—Motor Parts Station, 1505 Commerce St.  
Houston—Motor Parts Depot, 1021 Lamar St.  
San Antonio—Car Parts Depot, Inc., 523 No. Alamo St.  
Waco—Lightfoot Auto Parts Co.  
Wichita Falls—Gaines Motor Sales Co.

### VIRGINIA

Lynchburg—Southern Parts & Bearings Co., 617 Main St.  
Norfolk—Standard Parts Corp., 139 Olney Road.  
Richmond—Standard Parts Corp., 1806 W. Broad St.  
Roanoke—Roanoke Standard Parts Corp., 229 Franklin Road.

### WASHINGTON

Bellingham—Automotive Parts Co., 1319 Elk St.  
Seattle—Colyear Motor Sales Co., 919 E. Pine St.  
Spokane—Colyear Motor Sales Co., 1st Ave and Jefferson St.  
Tacoma—Ferguson Auto Supply Co., 723 Broadway.  
Wenatchee—Dennis Auto Co., Inc., 132 N. Wenatchee Ave.  
Yakima—The Lowe Tire Co., 418 E. Yakima Ave.

### WEST VIRGINIA

Fairmont—Butcher Auto Parts Co., 405 Cleveland Ave.  
Huntington—Huntington Auto Supply, 938 3rd Ave.  
Parkersburg—The A. E. Supply Co., 520 Seventh St.  
Wheeling—Genuine Parts Co., 903 Market St.

### WISCONSIN

Milwaukee—Stand. Unit Parts Corp., 482 Milwaukee St.

### CANADA

### ALBERTA

Calgary—Vancouver Parts Co., Ltd., 708-10 4th St., West.

### BRITISH COLUMBIA

Vancouver—Vancouver Parts Co., Ltd., 1260 Granville St.

This Trade Mark On All



Genuine Major Parts

**BROWN-LIFE GEAR CO. - Syracuse, N. Y.**

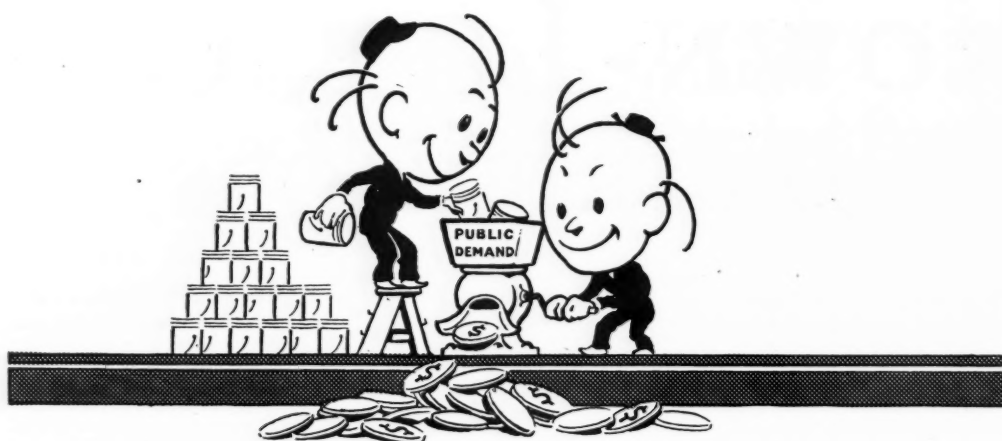
SAN FRANCISCO

CHICAGO

DETROIT

NEW YORK

LONDON, ENG.



## Here's a Fine Opportunity to *Make Money*

This is the day of the aluminum-alloy piston. More and more manufacturers are adopting them. More and more cars, equipped with them, are out on the road—

When the time comes to buy new pistons, some one is going to sell every one of these cars aluminum-alloy pistons. Not only pistons, but sell them other parts as well—and in addition, get all the profits a good, big overhaul job brings.

Kant-Skore dealers have an excellent opportunity to get the lion's share of this business. For Kant-Skores are the leading aluminum-alloy piston—and they are rapidly growing in popularity.

Kant-Skores are unique in the piston field. They may be fitted tighter than all others—due to the patented Kant-Skore spiral slot which absorbs expansion. No lost

compression, no piston rattle, less gas, more power is the result. And a cooler, peppier motor that sends your customers away delighted every time!

Kant-Skores are consistently advertised in newspapers. We are constantly advising overhauls. Stock a few Kant-Skores and be ready to cash in on the biggest development in the automobile field—the growing trend toward the use of aluminum-alloy pistons. The necessary outlay is small. The profits are excellent and constantly increasing. Ask your jobber—or write

### THE KANT-SKORE PISTON COMPANY\*

Cincinnati, Ohio, U. S. A.

\*We will be glad to consider distributors' applications for desirable territory still open.

**Kant-Skore**  
WEIGH LIGHTEST      PISTONS      FIT TIGHTEST

# How to turn a liability into an asset

If the car you sell is not equipped with a Protectomotor, the only air filter for passenger cars, do your customers a favor and turn an immediate profit for yourself by installing one.

Anybody can see how the Protectomotor actually **FILTERS** the air

Simply put a Protectomotor on your demonstrator and explain how it works as shown in this advertisement. Then say to the prospect:

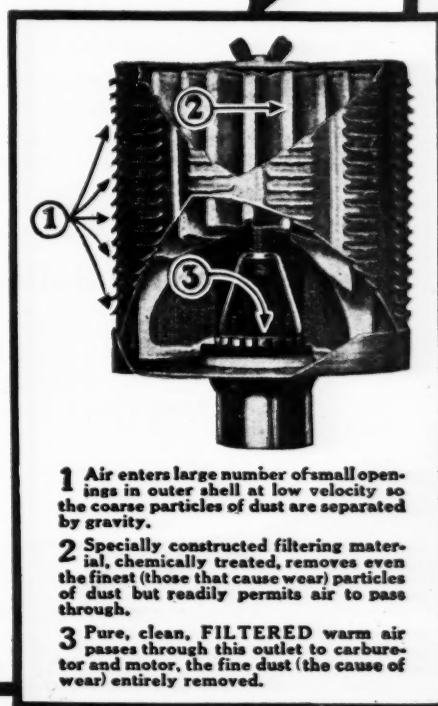
"By keeping all dust, sand, grit and other abrasives out of the motor Protectomotor prevents wear 75% to 85%; it prevents carbon and carbon troubles 60% to 75%; it keeps the oil clean; it enables you to drive your car three to five times as many miles before having carbon removed or valves ground; Protectomotor actually triples the life of the motor in any make of car."

**That's all—the sale is made  
The profit is yours**

Write today for Dealer's discounts

**STAYNEW FILTER CORPORATION**

Rochester, N. Y.



**1** Air enters large number of small openings in outer shell at low velocity so the coarse particles of dust are separated by gravity.

**2** Specially constructed filtering material, chemically treated, removes even the finest (those that cause wear) particles of dust but readily permits air to pass through.

**3** Pure, clean, FILTERED warm air passes through this outlet to carburetor and motor, the fine dust (the cause of wear) entirely removed.



**Car  
Owners  
Aren't  
So  
Dumb!**

**\$35.00**  
at your Jobber's

A lot of them know the cause and effect of compression loss, oil passing and crank case dilution. This Spring they'll take their over-hauling jobs to the shop equipped to give them the best service in the shortest time.

With the

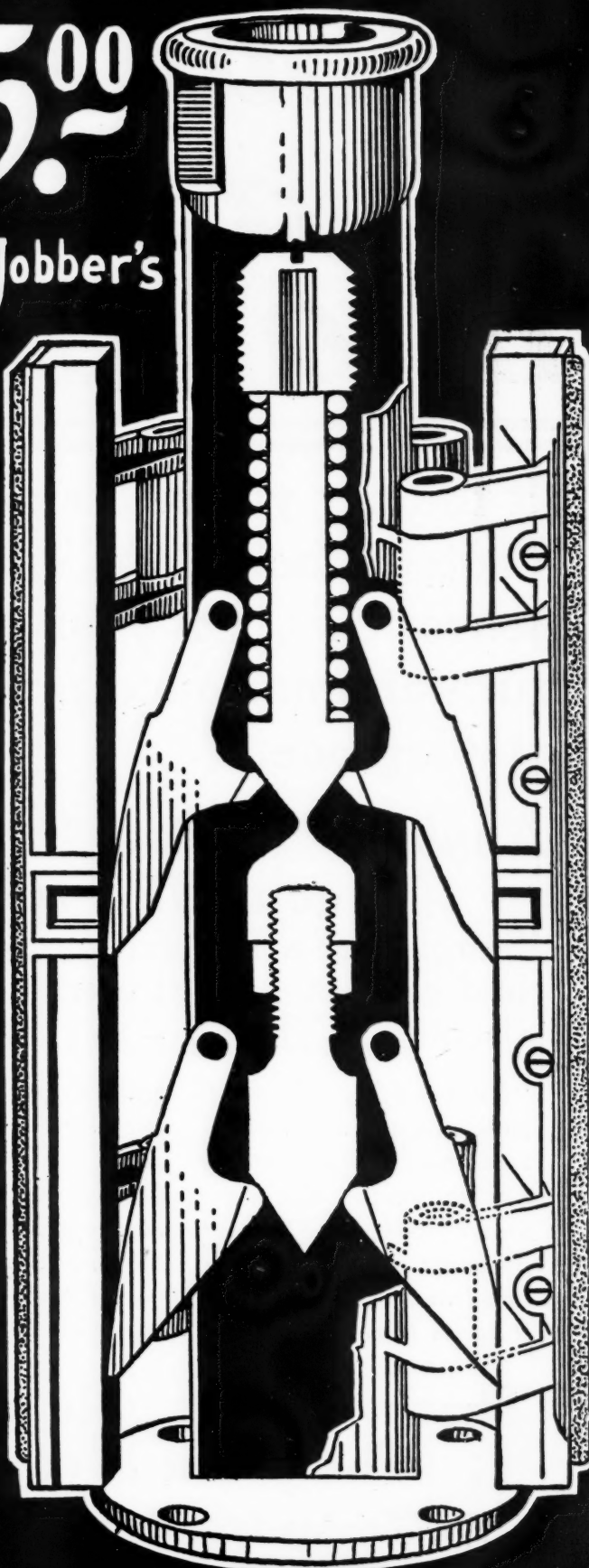
**Hall Cylinder Hone**

you can remove both the oval and the taper so that after fitting new pistons and rings, you can be sure the job won't come back on you. Because of its two-in-one principle,—solid pressure for sizing, spring pressure for fast cutting,—the Hall is the fastest cutting Hone made.

That's why the Hall Hone enables you to do a better job in less time at more profit.

**Write for Bulletin**

*New Bulletin just off the press. Write for a copy today, or better yet, order a Hall Hone through your Jobber.*



**THE HALL MFG. COMPANY**

502

Hall Building

1600-06 Woodland Ave.

TOLEDO, OHIO

**FREE:** SPECIAL PROPOSITION  
to tire dealers. It's new!  
Write for full details . . . today.



## HERE'S the SECRET!

**THE** basic idea behind this success is quite simple. It's just this:

1. Concentration on one brand—one line.
2. Cash business only.
3. Simple but resultful local advertising.
4. Guaranteed quality—backed to the limit by us, as manufacturer.

The big point is . . . that any tire dealer, anywhere, can apply these same sound principles and duplicate these results! Beginning right now.

**Write, today—for special free proposition**

Your own tire knowledge will tell you that the EMPIRE is right—compares with the best in weight—in price—in the durable, lasting stuff that's in it. But you've got to see it.

Act on this thing, right now. Write for details on our special proposition. It's something entirely new; something you've never had before. Try it . . . and see!

**EMPIRE TIRE & RUBBER CO.**  
Trenton, N. J.

# Tire-dealers!

**Read how this man increased his sales 45 %**

*An open letter from one of you—a veteran with 20 years' experience selling tires. This is news!*

Philadelphia Pa.  
January 9, 1926

Empire Tire & Rubber Corporation  
N. Clinton Ave. and Mulberry St.  
Trenton, New Jersey.

Attention: Mr. R. H. Paddock

Gentlemen:

In reviewing the past year, in which we have tried to follow your sales policy of ONE PRICE—ALWAYS THE LOWEST—FOR CASH, we have learned by experience the good that can be realized through such a policy, and also the bad that can be eliminated.

*One Brand.....Direct to the Consumer.....For Cash sounds Good.....works Better.....collects Best*

It would be impossible for us to carry an adequate stock at all times if we were to divide our efforts between two or three brands of tires. By confining our efforts to one brand, we have been able to properly service our trade, carry an adequate stock, and show real profits due to a satisfactory turnover.

In the old days, when we extended credit on tires, we found that we often paid \$15.00, plus other expenses, for a tire that was practically given away. We took a chance and sold the customer whom we believed was well-to-do, only to find later that we had to pay a collection agency \$15.00 to get for us what we discovered to be a worthless judgment.

I do not believe that the credit responsibility of the average automobile owner has materially increased, and I am afraid it is getting worse, so I often wonder why little dealers take the chances they do, simply to satisfy their pride in making a sale, which may prove worthless.

**No Sale is Complete Until the Money is in the Till**

We have increased our retail business 45 % and have an adequate stock, no bad accounts to worry about, and we therefore find ourselves in a pretty healthy position at the end of 1925. In 1926 we are going to succeed because we are going to stick to—

*One Brand.....At One Price.....Always the Lowest.....For Cash*

Very truly yours,

*Alfred Jensen*

# Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME

## Built Up To a Standard Not Down To a Price

January first 1926 Rickenbacker nailed its flag to the mast and on that banner is boldly inscribed the slogan which expresses the policy for the future.

This signifies that in construction, upholstery, trimmings and fixtures, Rickenbacker bodies now conform to the same high standard to which Rickenbacker motors and chassis have always been built.

If you are one of those who de-

rive a keen satisfaction from selling to your patrons an article of sterling quality:—

If you are looking for a line which is so well built that your profit from sales will not be consumed in servicing:—

If you like to demonstrate performance and sell a car that will add to your own reputation and honor to your name:—

Write the sales department for full information about the car —and our new sales plan.

### Rickenbacker Motor Company

Detroit, Michigan

#### Famous "Six" Prices

7 Pass. Phaeton	-	-	\$1795
5 Pass. Phaeton	-	-	1750
4 Pass. Roadster	-	-	1795
5 Pass. Coupe Sedan	-	-	1695
4 Pass. Coupe Roadster	-	-	1920
5 Pass. Brougham	-	-	1895
5 Pass. Sedan	-	-	2095
7 Pass. Sedan	-	-	2195
4 Pass. De Luxe Coupe	-	-	1995

*f. o. b. Detroit—plus war tax*



#### Vertical "Eight" Prices

7 Pass. Phaeton	-	-	\$2195
5 Pass. Phaeton	-	-	2150
4 Pass. Roadster	-	-	2195
5 Pass. Coupe Sedan	-	-	2095
4 Pass. Coupe Roadster	-	-	2320
5 Pass. Brougham	-	-	2295
5 Pass. Sedan	-	-	2495
7 Pass. Sedan	-	-	2595
4 Pass. De Luxe Coupe	-	-	2395

*f. o. b. Detroit—plus war tax*



**INTERNATIONAL  
HARVESTER  
TRUCKS  
COMPANY**



## *The Bus must be on time*

TRAINS don't wait for hotel guests nor for bus passengers. The bus must be unfailing in its performance. Only if every mechanical part is perfectly designed for its task and attuned thereto, can this result be truly obtained.

The record and popularity of International Busses is not to be wondered at in view of the studious attention devoted to the design and serviceability of even the smallest part.

In the building up of this appreciation of bus owners, the Lycoming Motor, with which International Model S. L. Busses are powered, has contributed a measurable share.

LYCOMING MANUFACTURING COMPANY

Makers of fine Fours, Sixes and Eights-in-Line  
WILLIAMSPORT :: PENNSYLVANIA

# LYCOMING

*Motors*

*Years Ahead in Automobile Motor Efficiency*

# Did You Enjoy This Copy?



YOU can get one like it every week for only \$3.00 a year—an average cost of a little less than six cents each.

Each and every man in the trade needs MOTOR AGE—needs the positive help

it offers in the solution of daily problems and the valuable ideas it gathers for its readers.

Your competitor reads MOTOR AGE, and you need to read it also if you want to keep up with the leaders of the automotive field.

## Here's How MOTOR AGE Will Help You

**SERVICING**—MOTOR AGE will show you how to make flat rates—How to sell Service—How to make customers permanent—How to organize a workshop—How to handle knotty problems—How to select Machinery—How to test electrical systems—How to make quick repairs—How to route shop work.

**HIRING**—How to get the right men—How to train them—How to pay them—How to get their co-operation—How to keep them enthusiastic.

**BUYING**—How to select an accessory stock—How to judge merchandise—How to get a fast turnover—How to avoid dead items.

**SELLING**—How other men do it—How to keep down overhead—How to advertise—How to make Salesmen produce—How to create a market—How to find prospects—How to make every sale pay—How to avoid losses—How to write letters that build business.

## AND THEN . . .

Whatever else you need to know to make your business run smoothly MOTOR AGE will tell you if you only ask—All personal inquiries receive personal attention from our editors. Every subscriber is encouraged to come to us with his problems, whether mechanical, legal, architectural or financial. Try us, and we will give you "Service you will like."

THE COUPON is here for your convenience. If you are already a subscriber, pass it on to some friend in the trade who is not. When he starts getting MOTOR AGE he'll appreciate the favor.

MOTOR AGE  
5 South Wabash Avenue,  
Chicago, Ill.

**IMPORTANT**—MOTOR AGE is published exclusively for the trade. Subscriptions are accepted only from those actively engaged in our field—so please don't forget to include your business card or letter head with this order.

Gentlemen: Enclosed find \$3.00 to pay for a year's subscription to MOTOR AGE, including all special issues published during the life of my subscription.

Name .....

Street and Number .....

City ..... State .....

Firm Name .....

**NOTE:** If you are already subscribing to MOTOR AGE, please hand this coupon to a dealer who is not. He'll become a better competitor from reading MOTOR AGE.

# NORTHEASTER



**\$7.50**

## A Real Magnetic Horn at a Low Price

STRONG VIBRANT TONE . . . SURE INSTANT RESPONSE . . . LONG LIFE  
RUGGED . . . SIMPLE . . . SCIENTIFIC

*The Horn That Lasts*

**NORTH EAST ELECTRIC CO.** *The Standard for Dependability and Long Life* **NORTH EAST SERVICE INC.**  
Starting, Generating & Ignition Equipment - Horns - Speedometers  
ROCHESTER · ATLANTA · CHICAGO · DETROIT · NEW YORK · KANSAS CITY · SAN FRANCISCO · PARIS · LONDON · TORONTO

THE NORTHEASTER is becoming the most popular Horn on the market. At the low price of \$7.50 this high grade magnetic horn offers an irresistible appeal to that army of motor car owners who want distinction at a reasonable price.

If you are not already selling the NORTHEASTER, you are passing up one of the big money-making opportunities of the season. Get in touch with the nearest North East Distributing Station and find out what the North East Horn line can mean to you in the way of real business.

The North East line of Horns comprises the NORTHEASTER, a real magnetic Horn, at \$7.50—the North East Model X motor-driven Horn now reduced to \$7.50—and the Model XA motor-driven heavy duty Horn at \$15.00.



They're SAFE  
and  
They SAVE



The  
Inspection We Give  
Includes These Five  
Important Points:

- 1—Testing each cell.
- 2—Replacing evaporation.
- 3—Cleaning terminals.
- 4—Cleaning top of battery.
- 5—Tightening hold-downs.

OWNERS of the cars you build are SAFE — and they SAVE — when Willard Batteries are used.

Buying "Willard" gives the car owner more for his money every time.

*The*  
**Willard Battery**  
**men**

We Service All Makes and Sell  
Willards for All Cars—for Radio, too.

# New Departure Ball Bearings

## A New Era in Front Wheel Bearings

NEW DEPARTURE special angular contact Front Wheel Ball Bearings, once set up in the front wheel, retain rigidly that correct, friction-free setting indefinitely. No wear, looseness or wobble ever develops. Ample load capacity for every service condition. Long life with no service expense is assured, because four million cars in a wide range of price classification have used them during the last four years with practically no failures reported.

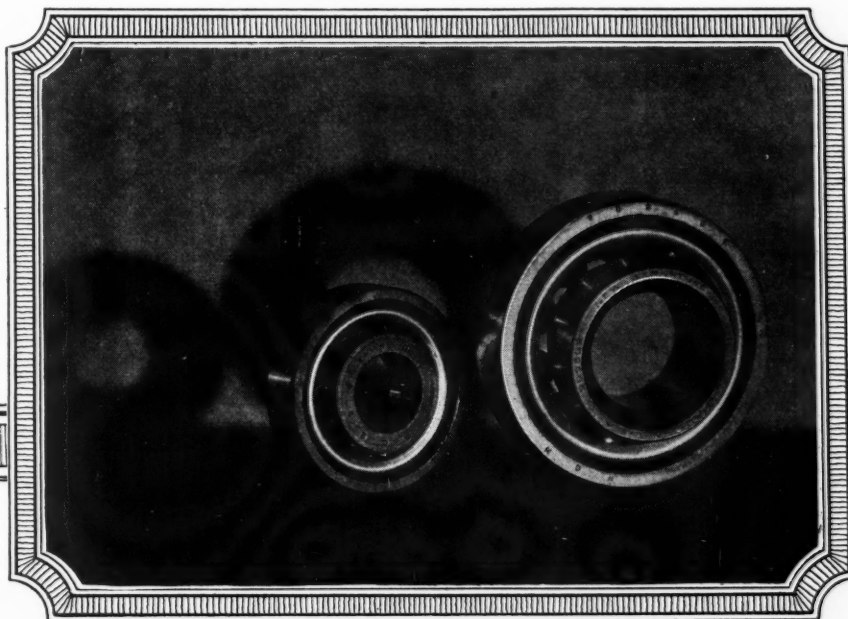
As quality and performance eclipse every other consideration, New Departure Front Wheel bearings will be used in ever-increasing quantities.

THE NEW DEPARTURE MANUFACTURING COMPANY,  
Detroit                      BRISTOL, CONNECTICUT                      Chicago

*New Departures can save you 30% of your electric motor maintenance costs.  
Let us show you how.*

313

313



# Every Week

There are so many important articles, current news items, and interesting features in the fifty-two issues of Motor Age each year, that subscribers find it most profitable to read carefully through every issue when it comes.

The timeliness of its contents is one of its most valuable assets.

Make it a point to look through Motor Age while its news is still fresh, and you will see why it is that its oldest friends and most loyal supporters read it regularly, every week.

## MOTOR AGE

5 So. Wabash Ave., Chicago, Ill.





# 56¢ makes \$10 in 20 hours

This is one approximate example of the current cost to operate a Tungar. For 24 hours of the day, the Tungar works—safely charging batteries all night, after *your* day is done.

In the battery service station, the low first cost of Tungar and the low cost of operation mean big profits. And a Tungar installation means a flexible, *paying* business.

In the garage—the auto service station—the car dealer's shop—a Tungar means giving every customer complete service. A Tungar takes no special knowledge and almost no attention. And it easily turns a neglected bit of wall space into *profits*.



Write for the booklet that shows the profit possibilities of the Tungar.

Merchandise Department  
General Electric Company  
Bridgeport, Connecticut

HEAVY DUTY  
**Tungar**  
REG. U.S. PAT. OFF.  
**BATTERY CHARGER**

Tungar—a registered trade mark—is found only on the genuine.  
Look for it on the name plate.

MERCHANDISE DEPARTMENT  
**GENERAL ELECTRIC**



## There is more than just "money profit" for you in selling the Original Bosch Horn

The progressive automotive merchant is constantly on the watch for quality products that will net him good profits and, at the same time, help him build up a quality reputation in his community.

That is why dealers everywhere have been quick to receive the Robert Bosch Horn and to offer it to their trade.

The Robert Bosch Horn (an original Bosch product), is already on thousands of fine motor cars. The musical, penetrating tone of this new high-frequency warning signal compels attention whether in crowded thoroughfares or on far-flung country roads.

It is suited, alike, to fine motor cars, motor busses, commercial cars, taxicabs and motor boats. Write for price schedules and agency details for selling Robert Bosch Automotive Equipment.



Original Bosch Automotive Equipment is identified by the trade mark shown above and the full name, "Robert Bosch." Be sure to specify "Robert Bosch" when ordering. Only then can you be sure of getting original and genuine Bosch quality as known the world over since 1887.

Robert Bosch Magneto Co.,  
Inc. (Otto Heins, President),  
109 West 64th Street, New  
York, N.Y. Chicago Branch:  
1302 South Wabash Avenue.

NEW PRICES			
The Robert Bosch Horn is made in three sizes—one quality.			
"Junior"	• •	now	\$16
"Standard"	• •	now	21
"Master"	• •	now	25
(LIST PRICES)			

*The Original*  
**Bosch**

ROBERT · BOSCH · MAGNETO COMPANY · INC.

No connection whatsoever with the American Bosch Magneto Corporation

## The Ugly Duckling lays a golden egg

Most dealers think their fan belt stock must be an Ugly Duckling—a no-profit line carried to meet the occasional demand. But when the dealer who handles Graton & Knight Leather Fan Belts figures up his year's sales he finds that the Ugly Duckling lays a golden egg.

Graton & Knight Fan Belts are steady, day-in-and-day-out sellers. They have no "off season." They require no special sales effort.

With our quick turnover system you can keep your stock at a minimum, turn it oftener and so make added profits. You carry endless belts for the more popular car only. Roll belting, which is easily cut to fit, for the others. Our handy display rack is a sales-making fixture you will be proud to have on your floor.

Every Graton & Knight Fan Belt has honest quality that guarantees your customers long-term service. Flat, "V" and Link "V" types. Made of the finest leather, specially tanned to resist oil, dust, water and heat. They run smoothly, grip firmly and require little tension.

Send in the coupon today and let us give you the details of our plan for increasing your fan belt profits.



## GRATON & KNIGHT

Standardized  
LEATHER BELTING

MAIL ME TODAY

THE GRATON & KNIGHT MFG. CO., Worcester, Mass., U. S. A.  
Send fan belt information: 101-G

Name.....

Company.....

Place.....

Prices, quality for quality, 5 to 10% lower than the field  
Tanners—makers of belts, straps, packings, fan belts, loose leather, etc.

# LINCOLN

**STOP** that Rebound Ride in Comfort



**LINCOLN**



*I am writing this ad myself because I don't believe you want to read a lot of advertising copy. If you knew, as I do, that Lincolns will give you a greater degree of riding comfort than you have ever before experienced, you would want a set for your car. I believe that tells the whole story.*

*E. V. "Head of the Business"*

**LINCOLN PRODUCTS COMPANY**  
Chicago, Illinois  
2649 N. Kildare Avenue  
Canadian Factory: Lincoln Products Co., Ltd., Montreal, Canada

**BALLOON SHOCK ABSORBERS**  
For All Cars—\$15 to \$40 Per Set of Four

Here is the first of the new series of Lincoln ads that will appear regularly in the Saturday Evening Post beginning with the March 6th issue.

A larger advertising campaign than ever before—a larger assortment and more dealer helps insure another year of record breaking sales on the fastest acting shock absorber on the market.

*Lincoln Sales for 1926 will be mighty profitable for the dealer who ties up his local advertising with this big advertising campaign. Write immediately for attractive proposition.*

**LINCOLN PRODUCTS COMPANY**  
2649 N. Kildare Ave. Chicago, Ill.  
Canadian Factory  
Lincoln Products Co., Ltd., Montreal, Canada



# BALLOON SHOCK ABSORBERS

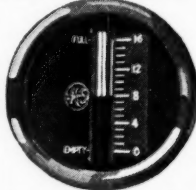


## A Complete Line of Bearings



Angular Contact Thrust Bearings, Angular Contact Radial Bearings, and Thrust Ball Bearings of all types, are available for you through our manufacture. And the assistance of our Engineering Department is an added advantage without extra cost to you. Send us your blueprints and inquiries.


**THE BEARINGS COMPANY OF AMERICA**  
LANCASTER, PENNA.  
Western Sales Office—1012 Ford Bldg., Detroit, Michigan



## The K-S GASOLINE Telegage

A gasoline gauge on the Dash. Note full page ad in colors in March 11th issue of Motor Age, also half page in this week's issue of the Saturday Evening Post. Write for description and proposition to the trade.

**KING-SEELEY CORPORATION**  
298 Second Street      Ann Arbor, Mich.



## BRAD-CUPS

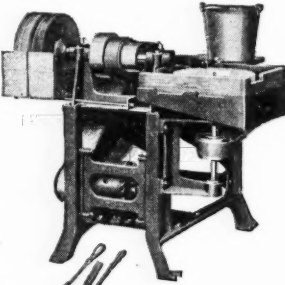
*The Perfect Spring Oiler*  
(Pat. 9-24-18)

Single      Write at once for our proposition.      Double

**C. GOODWIN BRADLEY, Inc., Syracuse, N. Y.**

## FAST AUTO GLASS EDGING

GRINDS  
SMOOTHS  
AND  
POLISHES  
EDGES OF  
AUTO GLASS




Write today—Dept. K  
**MAKE THESE EXTRA PROFITS**

**HENRY G. LANGE MACHINE WORKS**  
DEPENDABLE SINCE 1882

160 N. MAY ST.  
CHICAGO

## Good bye, buggy wheels



**Budd Wheel Company**      Detroit—Philadelphia

## Gemco BUMPERS

Tempered and nickel plated by our own exclusive process. Maximum strength, lasting beauty of finish. Write for catalog.

780 S. Pierce St. Milwaukee, Wis.



## A New Chapter Every Thursday

Each issue of MOTOR AGE is a new chapter, continuing the story of the development of the industry. And for those who apply the new ideas it gives them, it also continues the story of the development of their individual success.

Read MOTOR AGE every week.

# MOTOR AGE


5 So. Wabash Ave.      Chicago, Ill.

# Simplicity

**REBORER AND GRINDER**

A big money-maker in any automobile repair shop or garage. Ask for free demonstration in your own shop.

Port Washington,      Simplicity Manufacturing Company      Wisconsin




## PROTEX TIRE CHAINS

## Absolutely Stop Skid

Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.

Protex Chain Co., Inc.  
Waynesboro, Pa.

## INSURES A TOW HOME



# BASLINE AUTOWLINE

2-196

## NEXT WEEK

—is the time to read next week's issue of MOTOR AGE,  
as you are reading this week's issue this week.

## MOTOR AGE

5 So. Wabash Ave.      Chicago, Ill.

# WEL-EVER

## "OIL CONTROL" PISTON RINGS

The Motor Necessity That Has Made Good  
Backed by Seven Years' Satisfactory Service

**THE WEL-EVER PISTON RING CO., TOLEDO, OHIO**  
Sold most everywhere. If your dealer cannot supply you write us.

## A Continued Story of the Industry

**R**EADING MOTOR AGE every week is very much like following the growth of the automotive industry in story form.

It is as interesting as a fiction serial, and instructive to the point of making better and more prosperous dealers.

Reading MOTOR AGE every week when it comes, assures subscribers that they will stay up to date and profit accordingly.

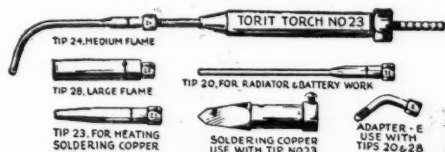
# MOTOR AGE

5 So. Wabash Ave.

Chicago, Ill.

## TURN WASTED TIME INTO PROFITS!

Every Purchaser Finds Numerous Uses for the  
**TORIT Acetylene Torch No. 23—**



PAT. JAN. 5, 1926

Uses Acetylene Only. No oxygen or air pressure required. Tips suck in air. Simply connect to Presto auto tank, light gas, and the outfit is put to work. Beats anything you ever tried for soldering, radiator repairing, melting, lead burning, tempering, heating, etc. Consists of torch, 4 tips for different kinds of work, soldering copper, 5 ft. rubber tubing, tank connection, and full instructions. Quickly Pays for Itself. Price (Complete as shown) **\$7.50**

ST. PAUL WELDING &amp; MFG. CO., 169 THIRD ST., ST. PAUL, MINN.

## Buy SMOOTH-KUT EXPANSION REAMERS

(TRADE NAME REGISTERED)  
With FULL spiral flutes that shear metal clean.

They cut a round, smooth hole without chatter—keep an edge longer and are reground by us at cost.

Patented April 7, 1925.  
Avoid inferior imitations.

Order through  
Jobber.



Millersburg Reamer & Tool Co., Millersburg, Pa.

## KESTER Self Fluxing SOLDER

Simple, Safe and Sure  
Requires Only Heat



### KESTER Acid Core SOLDER

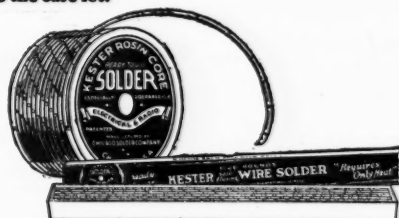
For general soldering and heavier electrical work. Self Fluxing—"Requires Only Heat." Standard size No. 3 about 1/8 inch in diameter, runs about 30 feet per pound. Packed on 1, 5 and 10 pound spools. Special gauges also available.



### Kester Metal Mender

The Household Solder

Here is the small package of Acid Core Solder. So simple anybody can use it. Ten cans about 1/4 pound each are packed per carton. Ten cartons (100 cans) to the case lot.



### Kester Rosin Core Solder

For very delicate electrical and radio work. Contains highest quality metals and rosin flux. Standard size about 3/32 inch in diameter, runs about 50 feet per pound. Packed on 1, 5 and 10 pound spools and 18 inch sticks in 5 pound boxes. Special gauges also available.



### Kester Radio Solder

(Rosin Core)

Safe, Sure and Simple—approved by radio engineers. Harmless to the most delicate parts. Absolutely non-corrosive flux makes low-loss joints. Ten cans about 1/4 pound each per carton. Ten cartons (100 cans) to the case lot.

## GENUINE SOLDER

**CHICAGO SOLDER COMPANY**  
4203 Wrightwood Avenue, Chicago, U. S. A.

Originators and world's largest  
manufacturers of Self Fluxing Solder

Your Jobber Can Supply You



## RAMCO

*Cushion*  
**INNER RINGS**

fit behind piston rings and keep them in perfect contact with the cylinder walls at any motor speed or temperature.

RAMSEY ACCESSORIES MFG. CORP., ST. LOUIS, MO.



### SPECIALTY SALESMEN

Sell the Dieringer Bushing Remover. Mechanics buy these tools on sight. Six sizes \$4.50. Liberal discount to hustlers.

E. T. DIERINGER  
Box 282 Bolivar, Ohio

Made in many sizes to meet any and all requirements in garage, tire repair shop and filling station. Six types: Two Stage, Single Stage, Air Cooled, Water

Cooled, Stationary, Portable. Our low prices enable you to get a Compressor for a small investment. Send for literature.

**The United States Air Compressor Co.**

5304 Harvard Ave.

Cleveland, Ohio

## EATON SPRINGS

*Formerly AMERICAN and PERFECTION Springs*



There's an Eaton Spring made expressly to fit any car, truck or bus.

The Eaton Bumper & Spring Service Company  
Cleveland, Ohio



## Valve Seat Reamer Sets

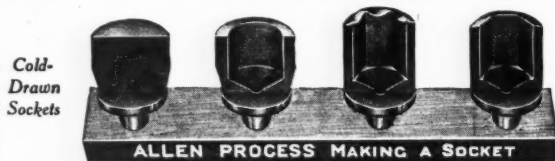
with the NEW Sioux Reamers! No. 38 set for 90% of all motors. No. 25 for Fords, Chevrolet, Essex 6, Durant, etc.

**Your Jobber Sells Them!**

ALBERTSON & CO.  
Sioux City, Iowa

## SCHEBLER

*The World's Finest* **CARBURETORS**  
THE WHEELER-SCHEBLER CARBURETOR CO., INDIANAPOLIS, U.S.A.



Cold-Drawn Sockets

ALLEN Wrench Sets

ALLEN PROCESS MAKING A SOCKET

The Allen Manufacturing Company, Hartford, Conn.

*Thirty-seven*  
**BRANCHES**  
**AHLBERG BEARING COMPANY**  
321 EAST TWENTY NINTH STREET, CHICAGO ILLINOIS

## Johns-Manville

### ASBESTOS BRAKE LINING

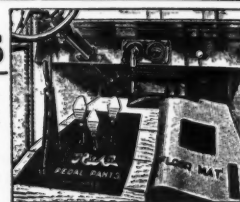
Cash in on This Profit Maker!

## NieNie PEDAL PANTS

Keeps cold air from whizzing through floor openings in Fords, Chevrolets, Dodges, Stars, Grays, Overland Fours. A sure-fire hit when the thermometer drops.

Sells quickly — adjusts without tools — big profits.

Ask your jobber today.



HERE is highest radio quality at lowest price. A chance to get permanent distribution for complete Delano line.

The Delano Sheraton sells for \$75—has built-in Delano loud speaker—5 tubes—special Delano hook-up and mahogany cabinet that completely encloses entire set. Wire or mail coupon today.

## DELANO RADIO

Modernola Co., Inc.  
Johnstown, Pa.

Gentlemen: Please send me full details.

Name \_\_\_\_\_

Address \_\_\_\_\_

## Kawneer

SOLID COPPER  
**STORE FRONTS**

Write for Special Book Garage Front

THE KAWNEER CO., 3324 Front St., Niles, Mich.



## UNITED STATES

### Portable Electric DRILLS

Built by the oldest maker of Portable Electric Drills in the World.

Ask for Catalog 105 THE UNITED STATES ELECTRICAL TOOL CO.  
Cincinnati, Ohio, U. S. A.



QUALITY—PROFIT—TURNOVER

## American Hammered Piston Rings

American Hammered Piston Ring Company  
Baltimore, Maryland

## TASCO

Gas Gauge for FORD CHEVROLET and OVERLAND

Sells Quick at \$1.25  
Retail



THE AKRON-SELLE CO.  
Akron, Ohio

## TAKE THE END-PLAY OUT!

—WITHOUT PULLING THE MOTOR



The C. A. ADJUSTABLE CENTER BEARING CAP corrects Ford crankshaft end play and sets magneto for highest efficiency without removing the motor. Easily and quickly installed. Guaranteed for one year. List price \$3.75. Ask your jobber or dealer or write us direct.

ADJUSTABLE BEARING CO., Inc.

Pat'd

7-22-'22

Dept. M.

Brazil, Indiana



## WELD ALUMINUM

Easier than cast iron by using  
**PIERCE'S ALUMINUM FLUX**

It flows the metal together without puddling—saves time, labor and gas,—makes a better weld.  
Used by good welders everywhere. Any welder can successfully weld aluminum with this flux.  
Sold on a money-back guarantee. Price \$5.00 per lb. Delivery free in U. S.  
Manufactured and distributed by  
**R. H. PIERCE, 910 JEFFERSON STREET, EUGENE, OREGON**

## KISSEL

CUSTOM BUILT

Kissel Motor Car Co., Hartford, Wis.



### The SO-LO JACK

\$6.00 Retail

4 1/2" LOW—HIGH 15 1/2"  
(Working Range 5" x 15 1/2")  
The REAL Balloon Tire Jack  
All Steel Construction  
POWERFUL—STURDY—EASY TO OPERATE  
A Sure Seller with your Trade  
**SO-LO JACK CO., Inc.**  
537 Commonwealth Ave., Boston, Mass.

### THE WALDEN FORE-LITE

Mounted ahead of the radiator and operated like a spotlight from the instrument board, the WALDEN Fore-Lite satisfies a need hitherto filled by make-shifts. Universal fittings. Selling fast wherever introduced. Ask your jobber, or write us direct, giving his name.

**THE WALDEN CO.**

1114 S. Michigan Ave.

Chicago



## CRANE

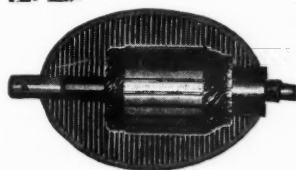
Wheel and Gear Pullers  
**CRANE PULLER COMPANY**  
South Deerfield, Mass. U. S. A.

## GATES VULCO

Fan Belts and Radiator Hose

Made By

*The World's Largest Makers of Fan Belts*



### FREDERICKS Rewinding Service

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.

*Packard*  
**Cable**  
The Packard Electric Co.  
Warren, Ohio



## "As Silent as a Shadow"

### Quincy Compressors

Quincy, Illinois

J-538

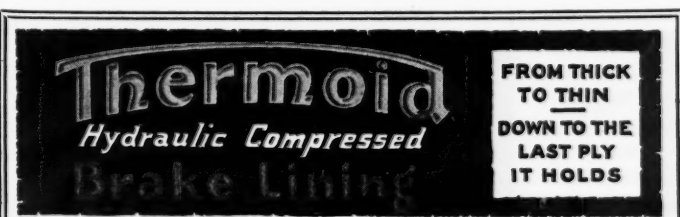
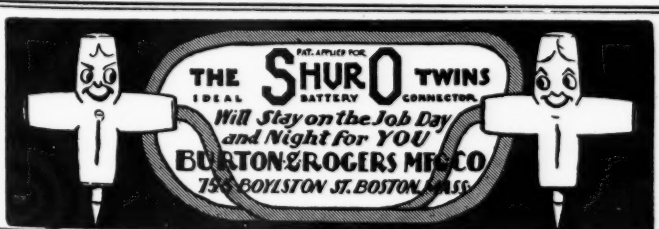
## PIRMO

NON-EVAPORATING ANTI-FREEZE COMPOUND

**ONCE EVERY WINTER**

One filling protects radiator from freezing all winter long.

**BOYCE & VEEDER CO., Inc., Long Island City, N. Y., U.S.A.**



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#### AUTO PARTS

SAVES 50% TO 75% ON ALL CARS

New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

**INDIANA AUTO PARTS CO.**

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LARGEST CAR WRECKERS IN INDIANA

#### PARTS

#### HOUSE OF A MILLION AUTO PARTS

The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

**DOUGLAS AUTO PARTS CO., INC.**  
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#### HELP WANTED

**WANTED:** Draftsman, experienced on strictly high grade Automobile work, must have had experience on high priced cars, give age, experience and former concerns employed by in first letter. Address Box 6261, care of Motor Age, 5 S. Wabash Ave., Chicago, Ill.

#### PATENTS & PATENT ATTORNEYS

Attorney-at-Law and Solicitor of Patents  
**C. L. PARKER**

Formerly Member Examining Corps, United States Patent Office

American and foreign Patents secured. Searches made to determine patentability and validity. Patent suits conducted. Pamphlet of instruction sent upon request.

McGill Building, WASHINGTON, D. C.

#### FOR SALE

**FOR SALE—**Rotary valve mechanism patents No. 1,152,763, No. 1,189,625. Sole owner, Floyd T. Romberger, 501 Lafayette Life Bldg., Lafayette, Ind.

# Special Garage Set No. 10PE WATERVLIET SPIRAL EXPANSION ALIGNING REAMERS



**10** PERFECT REAMERS in a sturdy oak case—each with the Water-vliet self-cutting front pilot, the edge-holding, smooth-cutting Water-vliet spiral flutes, the Water-vliet exact alignment and true expansion features and the Water-vliet positive guarantee.

Equips the garage mechanic and service man to handle piston pin work perfectly on practically every car and truck that comes in. For a full-bearing surface with a mirror-like finish—use Water-vliets.

## .....Resharpener Service.....

Any Water-vliet Reamer can be factory re-sharpened for a service fee of only \$1.

***They Will Not Chatter***

*Ask Your Jobber or Write for Literature*

**WATERVLIET TOOL CO., Inc.**  
1037 Broadway Albany, N. Y.

New York—1780 Broadway

Kansas City—711 Mutual Bldg. San Francisco—611 Turk St.

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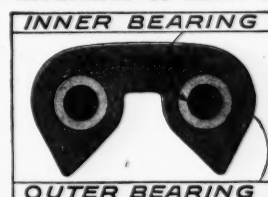
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## PREPARE NOW—



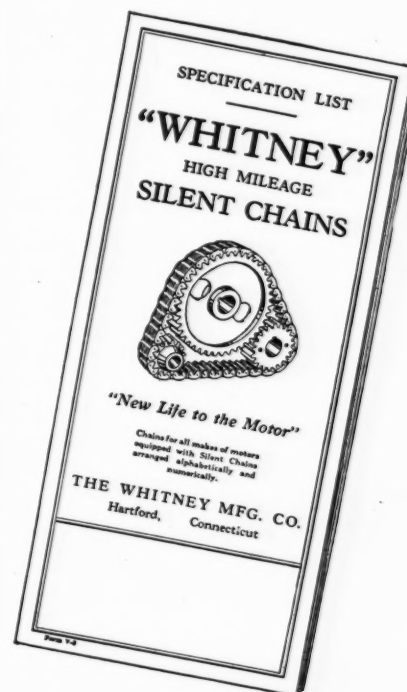
To take care of SPRING REPAIRS. No single wearing part is more vital to the smooth sweet-running motor than the TIMING CHAIN.

NEARLY ANY NEW CHAIN will tone up the car's performance, but a really **satisfactory** job requires a chain with many thousands of miles of potential service built into it. With a bearing surface practically double that of other silent chains, the joint construction of



## "WHITNEY" SILENT HIGH MILEAGE CHAINS

insures an installation of reliability and permanence, and the chain usually outlasts the car itself.



Have you a copy of this specification list?

**Ask Your  
Jobber or  
Write**

**THE WHITNEY MFG. CO.**  
HARTFORD CONN.





# Next month you'll know his name

~ and here's what  
he thinks about  
*the repair game.*

"I don't pretend—and neither do you—that taking down rear axles and lifting off cylinder heads is the world's prize pastime. But it's a good, honest, useful way to keep up the habit of eating regularly. And, by golly, there's solid satisfaction in taking a limping engine, tuning 'er up, and sending 'er off with that smooth, easy hum that says 'all O. K.'"

"Of course, you're bound to run into a certain percentage of grief

with chronic kickers, dead beats, and jobs that take longer than you estimated.

"But every now and then someone discovers a workable way to cut down the percentage—and I think I can pass along one or two tips in this line myself. Possibly you can pass back a few tips of your own, and among the whole crowd of us we'll make the game a lot more profitable for everybody—including our customers."

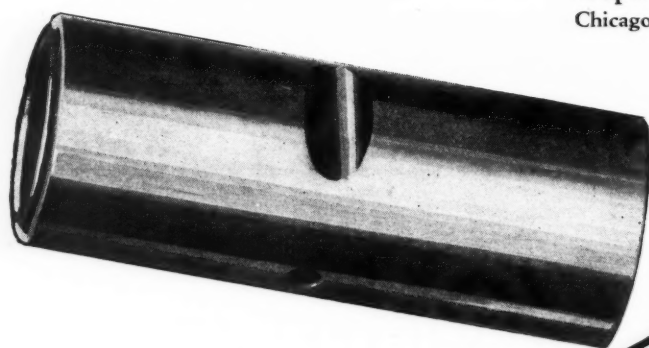
*Watch for what he has to say next month*

**KING QUALITY PRODUCTS, INC.**

Dept. F.  
Chicago

San Francisco  
Bridgeburg, Ont.

Buffalo, N. Y.  
Kansas City



# MANLEY

## Pneumatic Tire Inspector

Operated by your tire inflation system—no manual effort required—turn valve to spread tire—turn valve to permit tire to return to normal—can be used for inspecting inside or outside.

Another great time and labor saver by R. E. Manley, originator of the Automobile Wrecking Crane.

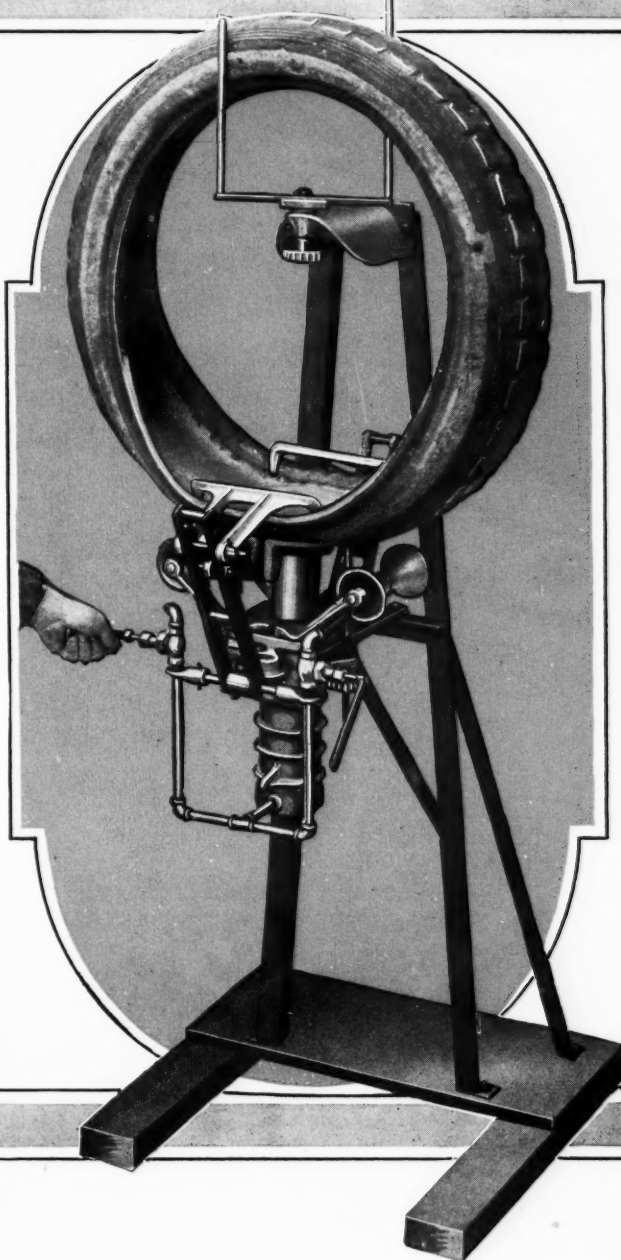
Operates by air pressure from your tire inflation system.  
...

Saves time and effort.  
...

Controlled by two lever valves.  
...

Will keep tires spread indefinitely.  
...

Machine is portable, being mounted on wooden base, as illustrated.  
...



Handles pneumatic tires up to 7" or 8".  
...

Is used for inspecting inside and outside of tires.  
...

Quickly adjusted to hold tires any size in upright position.  
...

Protected electric light socket is provided for illumination of inside of tire.  
...

Price unusually low for power operated machine.

CAT. No. 909  
Price complete, as illustrated.....\$44  
Your Jobber Can Supply You  
For new 1926 Catalog describing the entire Manley line write to

MANLEY MFG. CO., YORK, PA.

*This is a  
Manley Year*

# Success is Seeking Good Men!

**T**HE big success of the new Chandler line can be turned into your own personal success — anytime you say the word.

You will succeed with Chandler that's sure. Chandler Dealers everywhere are selling cars and making money.

Certainly the cars have everything in their favor. Chandler's beauty, Chandler's power, Chandler's new "One Shot" system of lubricating the chassis, Chandler's lower prices — a long list of advantages puts Chandler at the top of the list in its price class!

To be a prosperous dealer, sell prosperous cars. Sell Chandlers. Write or wire for the Why and the Where and the Wherefore.

THE CHANDLER MOTOR CAR COMPANY, CLEVELAND  
Export Department, 1819 Broadway, New York City

*Back of  
Winning Performance  
is Quality*



# CHANDLER